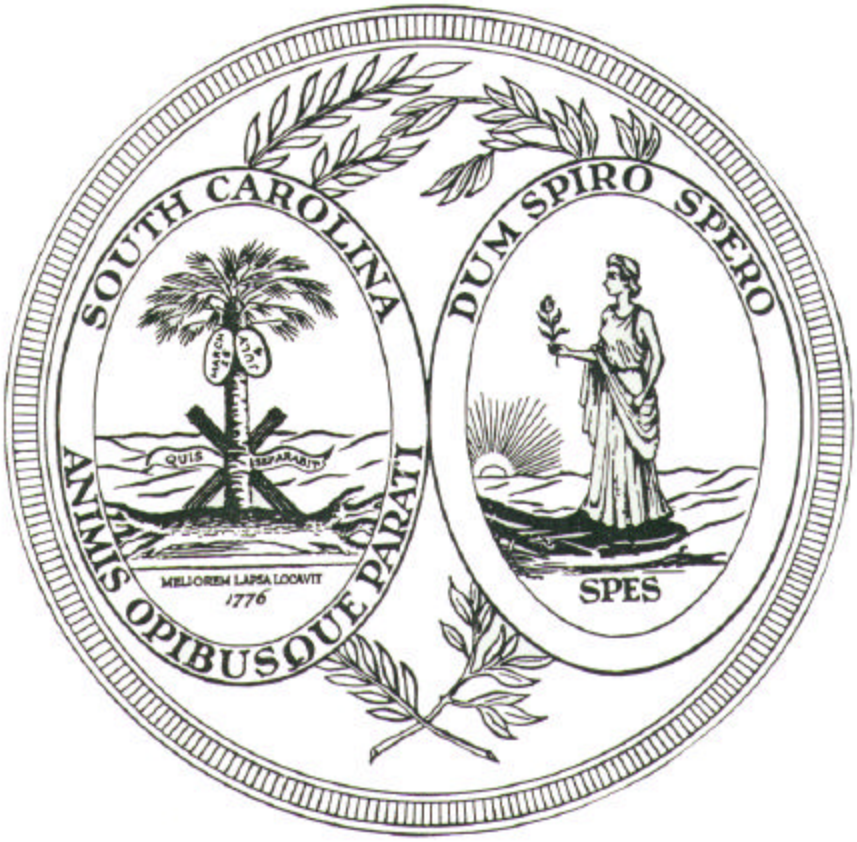
2001 South Carolina Energy Use Profile



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State Budget and Control Board

SOUTH CAROLINA Energy Office

FOREWORD

South Carolina is a growing state, where energy plays a primary role in its economic success. Thus, as our economy has made rapid progress over the last decade, so too have our energy needs. South Carolina spends nearly $8 billion per year on energy and ranks 18th in the nation in total energy consumption per capita, much more than the United States average in the 1990's.

South Carolinians currently enjoy energy on demand with some of the lowest prices in the nation. Still, the amount of money spent on energy is an important decision faced by South Carolinians every day, and will become even more important as we begin to address public policy issues such as utility deregulation, sustainable development, and environmental protection.

If we are to continue to have a safe, viable, and environmentally sound energy future in South Carolina, policy makers and citizens alike must have access to the best possible information to make informed decisions. The *2001 South Carolina Energy Use Profile* provides the latest available information on energy consumption, prices and expenditures, and energy use trends for the state of South Carolina. The information is presented in brief summaries, tables, and graphs in order to provide comparisons among different fuel types and economic sectors, and to show how South Carolina fares in relation to the rest of the United States.

Because of the integral relationship among the economy, the environment, and energy, it is essential to provide objective energy use statistics to assist in shaping not only South Carolina's energy policy, but also its environmental and economic policies.

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Executive Summary

The *2001 South Carolina Energy Use Profile* is a detailed and comprehensive source of the latest available information on energy consumption, prices, expenditures, and sources of supply. Since energy plays an increasingly critical role in the economy and everyday lives of all South Carolinians, energy trends and patterns presented in this profile may serve as a useful interpretative tool for state policy makers, educational institutions, and the general public.

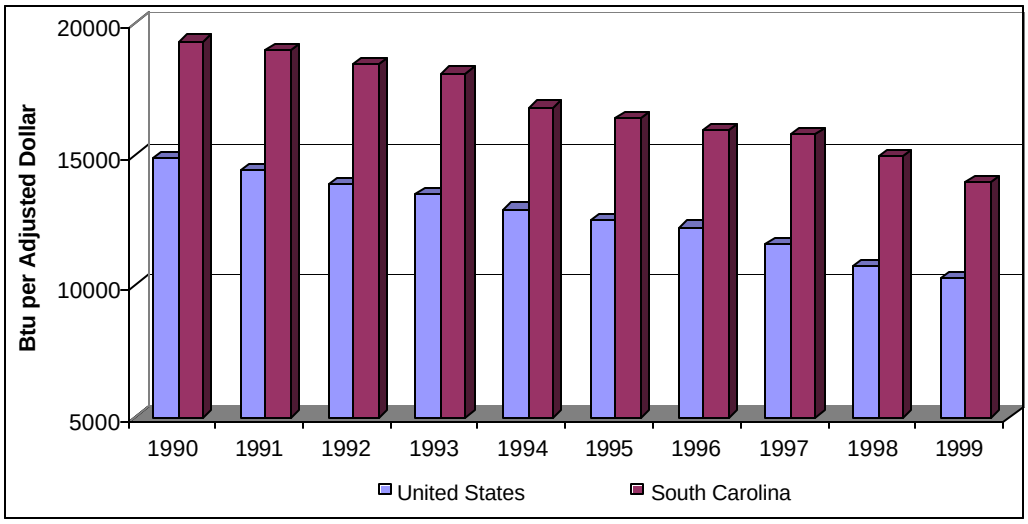
The mission of the South Carolina Energy Office (SCEO) is to increase efficiency in the use of all energy resources in all consuming sectors of the state, and, to the extent practical, to maximize environmental quality and to minimize the cost of energy use. Within this context, the *South Carolina Energy Use Profile* is designed to serve not only as a basis to analyze South Carolina-specific energy trends and activities, but also as a valuable tool for resource planning.

All efforts have been made to ensure that the data provided in this profile are compiled from the best available information, and are based entirely on regularly published data from sources in the public domain. A large portion of the data in this profile is derived from the two most detailed and complete sources of United States and state-level energy data, the *State Energy Data Report* and the *State Energy Price and Expenditure Report*. Both reports are published by the Energy Information Administration of the U.S. Department of Energy, and are used extensively by nearly all state energy offices. As can be expected, it is a time-consuming task for the Energy Information Administration to collect and publish such detailed energy data from all fifty states. Consequently, the energy information included in these two publications is two to three years behind in being publicly available.

This *Energy Use Profile* is comprised of data presented in tables and charts. In order to provide a snapshot of the overall context of energy consumption performance in South Carolina as compared to the United States as a whole, two measurements of energy efficiency are provided in this summary. The first involves energy efficiency as measured in terms of energy consumption per dollar of gross state product. In this particular area South Carolina has made significant progress over the last two years. Since 1990, the economy has grown slightly faster than energy consumption, resulting in a 27.7 percent decrease (from 19,316 to 13,964) in Btu consumed per dollar of economic output (gross state product, adjusted for inflation). Nevertheless, South Carolina's energy efficiency trails behind the national average of 10,278 Btu per dollar of gross domestic product, which is nearly 25 percent lower than South Carolina's energy efficiency index.

Figure 1

Energy Consumption per Dollar GSP/GDP, 1990-1999

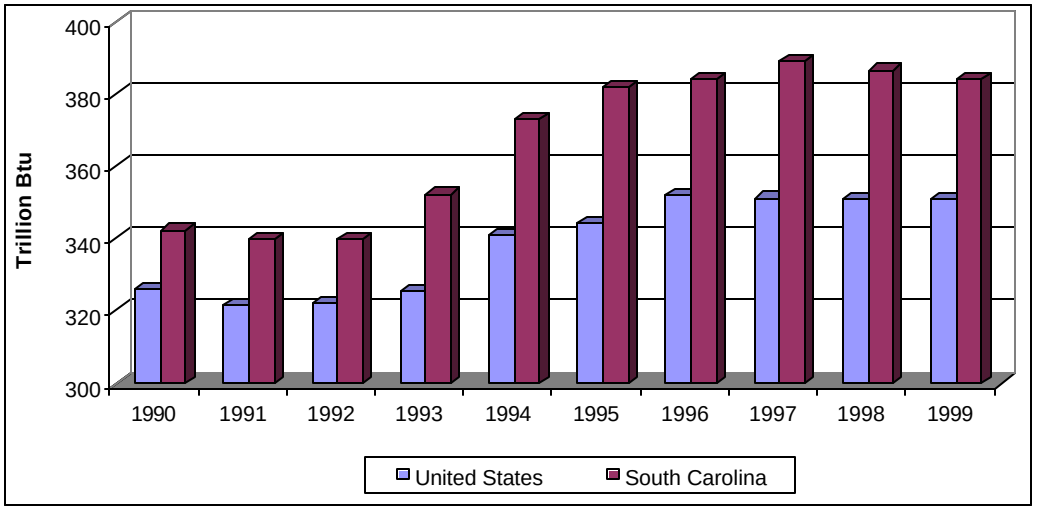


Source: Energy Information Administration, *State Energy Data Report* and U.S. Dept. of Commerce, Bureau of Economic Analysis.

A second measure of energy efficiency is per capita energy use. South Carolina ranks 19th in total energy consumption per capita, using more energy per person than 31 other states. However, South Carolina's energy consumption per capita is showing signs of leveling off after increasing more rapidly than the nation's average during most of the 1990's. South Carolina saw a 12.2 percent increase in energy consumption per capita between 1990 and 1999, while the United States per capita rate rose only 7.6 percent (Figure 2). South Carolina's total energy use increased 18.6 percent between 1990 and 1999, while its population grew by 11.4 percent over the same period.

Figure 2

Energy Consumption per Capita, 1990-1999



Source: Energy Information Administration, *State Energy Data Report*.

The *2001 South Carolina Energy Use Profile* is organized into five sections:

Section 1: Total Energy Data

- South Carolina's total energy consumption has increased more rapidly than that of the United States as a whole over the last 29 years, increasing 99.7% from 1970 to 1999, while for the same period, United States energy consumption increased by only 40.8%. Most of the increase in South Carolina occurred in the nuclear sector, where energy use increased by 172.4%. In 1999, nuclear energy accounted for 32.5% of the state's energy consumption as compared with only 7.1% on the national level. The petroleum (28.1%) and natural gas (9.8%) sectors accounted for less of the state's energy consumption in 1999 than the United States' average. Coal consumption in South Carolina and the nation was nearly even, at 24.3% and 22.4% respectively.
- In 1999, South Carolina ranked 20th in the nation in coal consumption, 35th in natural gas consumption, 27th in petroleum consumption, and 18th in electricity consumption.
- From 1970 to 1999, South Carolina greatly surpassed the nation as a whole in end-use energy consumption with the South Carolina residential sector seeing an increase of 93.1% as compared with 34.1% for the U.S.; commercial sector energy use increasing by 180.8% while the U.S. only saw a 80.5% increase; industrial sector consumption increasing by 90.2% as compared with a 21.3% increase in the U.S.; and the transportation sector seeing an increase of 89.5% as compared with 63.6% for the nation.
- In 1999, the South Carolina industrial sector accounted for 41.4% of energy consumption, followed by the transportation sector with 25.2%, the residential sector with 19.3%, and the commercial sector with 14.1%. This closely conforms to the national trend in end-use sector consumption.
- Electricity accounts for the majority of residential energy consumption in South Carolina (62.4%), but accounts for only 36.4% on the national level. Natural gas usage in South Carolina has declined since its peak years of the early 1970s, accounting for 20.4% of energy consumption. Natural gas consumption accounts for 45.2% of residential energy consumption in the United States. Petroleum and biofuels comprise 15.6% of residential energy consumption in South Carolina, with 18% being the national rate. South Carolina ranked 24th in the nation in total energy consumption in the residential sector.
- Electricity accounts for 63.9% of end-use energy consumption in the South Carolina commercial sector, as compared with 49.0% in the United States. Natural gas makes up 22.7% of the commercial energy consumption in South Carolina, while the national rate is higher at 40.8%. Petroleum accounts for about 8.5% of commercial energy consumption in both South Carolina and the United States. South Carolina ranks 26th in the nation in energy consumption in the commercial sector.
- South Carolina ranks 19th in the nation in industrial energy consumption as indicated by the latest available data. Unlike in the residential and commercial sectors, which rely primarily on electricity, energy consumption in South Carolina's industrial sector is quite diversified: electricity (27.2%), natural gas (26.2%), and a surprising biofuels with 18.0%. Petroleum accounted for 17% and coal with 11.5%.
- South Carolinians spent $8.3 billion on energy in 1999. South Carolina began to see an overall increase in energy expenditures in 1980. By 1999, energy expenditures had risen by 755.5% in nominal terms since 1970, while energy consumption increased by 99.7%. The transportation sector accounts for the largest share of energy expenditures with

35.5% in 1999, the residential sector with 26.0%, the industrial sector with 23.1%, and the commercial sector with 15.4%. This closely reflects the trend on the national level, where the transportation sector also accounts for the largest share of energy expenditures with 37.4%, followed by the residential sector with 24.6%, the industrial sector with 20.5% and the commercial sector with 17.5%.

- In 1999, South Carolina ranked 21st in the nation for electricity expenditures, which accounted for 45.0% of all of the state's energy expenditures. Petroleum accounted for 37.8% of South Carolina's energy expenditures, with a ranking of 27th in the nation. On the national level, petroleum accounted for 43.2% of all energy expenditures, with electricity accounting for 37.4%.

Section 2: Electricity

- Electricity generation in South Carolina increased by 99.5% from 1980 to 2000, with power plants producing over 90 billion kilowatthours of electricity in 2000. Nuclear energy accounted for 56.5% of electricity generation in South Carolina in 2000, compared to only 23.5% in the United States. Coal is the major fuel source for electricity generation in the United States, accounting for 56.3% in 2000, compared with 42.5% in South Carolina.
- The number of electric consumers in South Carolina increased by 25.1% from 1990 to 2000. Residential consumers increased by 24.1% during this period, with commercial consumers increasing by 33.7%, and industrial consumers increasing by 14.9%.
- South Carolina electric retail sales to ultimate consumers by sector increased by 116.5% from 1980 to 2000, and by 39.3% from 1990 to 2000 in terms of kilowatthours. During the two-decade period 1980 to 2000, electric sales in the residential sector increased by 101%, sales in the commercial sector increased by 128.8%, and sales in the industrial sector increased by 107.2%. In 2000, the industrial sector comprised 42.9% of all electric sales in South Carolina, followed by the residential sector with 32.7%, and the commercial sector with 23.2%.
- Residential statistics for investor-owned electric utilities show that the average annual electric bill for South Carolina residential electric customers increased by 85.0% or $487.90 from 1980 to 2000, as compared with an increase of 88.9% or $406.50 on the national level.
- 47 electric utilities in South Carolina serve 2,059,496 customers, with a residential sector average rate (cents per kWh) of 7.58, a commercial sector average rate of 6.35 and an industrial sector rate average rate of 3.74 in 2000.
- 47 electric utilities in South Carolina had sales of 25,270,116 thousand kWh in the residential sector, 17,483,353 thousand kWh in the commercial sector, and 33,307,512 thousand kWh in the industrial sector in 2000.
- Estimated emissions from fossil-fueled steam-electric generating units at South Carolina electric utilities increased by 23.2% from 1993 to 1998.
- As of January 1, 1999, there were 50 power plants with a rating capacity of 18,723.8 megawatts operating in South Carolina. These power plants contain a total of 207 generators.

Section 3: Petroleum

- Gasoline consumption in South Carolina increased by 45.0% during the two-decade period 1980 to 2000. In 2000, 3.1 million vehicles drove 45.5 billion miles on South Carolina highways while consuming 2.2 billion gallons of gasoline. South Carolina's annual motor

fuel consumption is similar to the consumption trend of the United States, but continues to substantially exceed the national average on a per capita basis.

- During the two-decade period 1980-2000, diesel fuel consumption in South Carolina increased by 137%.
- South Carolina petroleum consumption increased by only 17.7% during the period 1979 to 1999. The two petroleum products that were consumed the most during this same period were motor gasoline (39.2% increase) and distillate fuel oil (59.8% increase).
- Petroleum use in the transportation sector increased by 42.9% from 1979 to 1999. In 1999, the transportation sector accounted for 80.2% of all petroleum use in South Carolina, followed by the industrial sector, which accounted for 13.7% of the total petroleum use.
- Distillate fuel oil consumption increased in South Carolina by 66.8% during the period 1980 to 2000. The largest increase occurred in the transportation sector with a 145% increase, followed by the commercial sector with an increase of 50.5%. Significant decreases were experienced in both the residential and industrial sectors during this same period.
- Kerosene consumption in South Carolina has been gradually declining over the past 20 years, experiencing a 50.8% drop from 1980 to 2000.
- South Carolina prices for No. 2 distillate fuel increased by 8.9% during the period 1983 to 2000. During the same period, kerosene prices increased by 18.4%.

Section 4: Natural Gas

- The number of residential customers served by investor-owned natural gas companies increased by 242,291 (114.8%) during the period 1980 to 2000. The commercial and small industrial sectors had an increase of 29,719 (138.9%) customers, and the large industrial sector experienced a customer growth rise of 971 (119.3%). Altogether, there was an increase of 272,980 (117.0%) in the number of customers served by privately-owned natural gas utilities from 1980 to 2000.
- End-use deliveries of natural gas in South Carolina were 29.8% higher in 2000 than in 1980. Most of the increase occurred in the industrial sector, where natural gas deliveries increased by 28.7%. On a comparative level, the industrial sector accounted for 64.3% of all natural gas deliveries in South Carolina in 2000, while accounting for 52.8% in the United States.
- The number of residential customers receiving natural gas service from investor-owned companies in South Carolina increased by 114.8% from 1980 to 2000, natural gas sales to residential customers increased by 25.2%, and the average use per residential customer decreased by 41.7%.
- South Carolina natural gas prices rose by $4.96 (118.4%) per thousand cubic feet from 1980 to 2000 in the residential sector as compared to $4.08 for the United States average. In the commercial sector, South Carolina natural gas prices increased by $4.51 (140.5%) per thousand cubic feet with the average United States prices increasing by $3.20. The industrial sector in South Carolina experienced an increase of $1.94 (64.9%) per thousand cubic feet with an increase of $1.92 for the United States. The price of natural gas deliveries to South Carolina electric utilities increased by $3.24 (130.6%) per thousand cubic feet and by $2.11 for the United States.

Section 5: Coal

- Annual coal consumption in the residential and commercial sectors, though very minimal, continues to fluctuate dramatically in South Carolina. From 1980 to 2000, the industrial sector increased its consumption of coal by 3.8%, and electric utilities increased their coal consumption by 89.7%. Overall, coal consumption in South Carolina increased by 69.8% from 1980 to 2000. In 2000, electric utilities accounted for 88.7% of all coal consumed in South Carolina, while the industrial sector accounted for the remaining 11.3%.
- Coal receipts at South Carolina electric utilities increased by 1,337 thousand short tons from 1998 to 2000 (10.3%). At the same time, the average delivered cost of coal to these utilities decreased by $1.33 per short ton. The Winyah and Cross plants operated by Santee Cooper accounted for the most coal receipts of all South Carolina electric plants, numbering 3,097 and 3,037 thousand short tons respectively, in 2000.
- Quarterly average coal prices to electric utilities in South Carolina hovered in the $37.00-$44.00 per ton range during the period 1980 to 2000. The only aberration occurred during the years 1983 and 1984, when the prices rose to $49.15 and $49.28 per ton, respectively. The total average price has been steadily declining, falling to an all-time low figure of $35.40 per ton in 2000.
- Between 1970 and 1999, coal expenditure estimates in the residential sector increased by 14.8%, the commercial sector increased by 26.4%, the industrial sector increased by 9.7%, and the electric utilities sector 61.7%. Collectively, coal expenditure estimates in South Carolina increased by 50.7% during this same period.

SECTION 1: TOTAL ENERGY DATA

Total energy consumption in South Carolina increased by 97.5% from 1970 to 2000, while energy consumption in the United States rose by only 44.5% during the same period. Most of the increase in South Carolina occurred in the nuclear sector, where energy use increased by 179.6% from 1980 to 2000. In 2000, nuclear energy accounted for 31.4% of the state's energy consumption as compared with only 8.0% on the national level. On a comparative level, in 2000 South Carolina ranked 20th in the nation in coal consumption, 36th in natural gas consumption, 26th in petroleum consumption, and 18th in electricity consumption.

Table 1.1

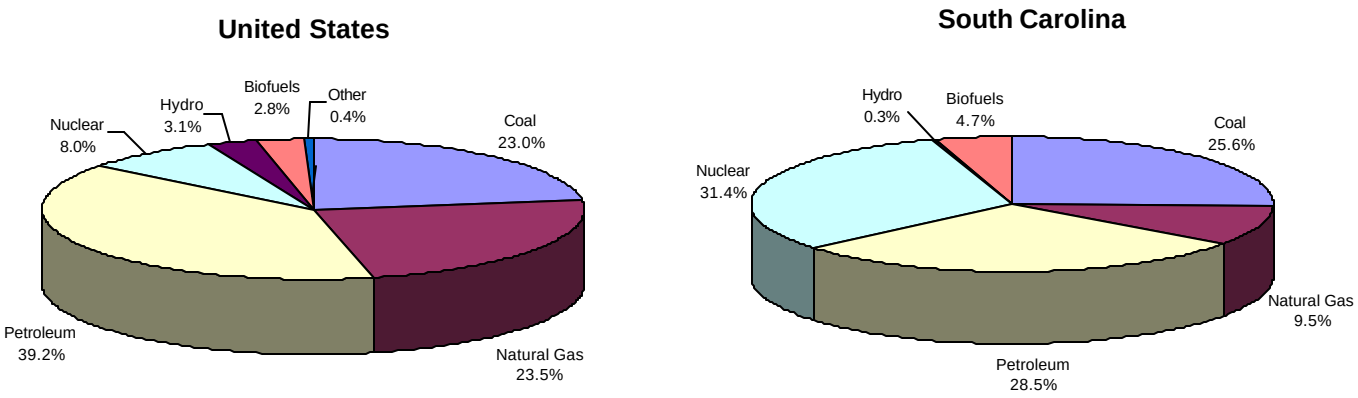
South Carolina Annual Consumption by Fuel Source
1970-2000
(Trillion Btu and Percent of Total)

Year	Coal		Natural Gas		Petroleum		Nuclear		Hydro		Biofuels		Net Total	Total Resource[1]
1970	140.1	18.7%	164.3	22.0%	302.2	40.4%	0.1	0.0%	24.1	3.2%	0.0	0.0%	630.8	747.8
1975	140.2	16.6%	125.9	14.9%	340.5	40.3%	214.3	25.3%	45.9	5.4%	0.0	0.0%	866.8	845.4
1976	171.0	18.5%	152.4	16.5%	393.8	42.5%	197.2	21.3%	35.4	3.8%	0.0	0.0%	949.8	925.5
1977	189.6	19.7%	141.6	14.7%	427.6	44.4%	185.6	35.9%	31.8	3.3%	0.0	0.0%	976.2	963.1
1978	192.3	20.1%	121.3	12.7%	427.0	44.6%	212.9	22.2%	33.2	3.5%	0.0	0.0%	986.7	957.2
1979	206.8	21.8%	121.5	12.8%	405.3	42.6%	198.2	20.9%	41.0	4.3%	0.0	0.0%	972.8	950.5
1980	245.8	24.3%	146.9	14.5%	365.8	36.1%	189.8	18.7%	31.4	3.1%	31.4	3.1%	1011.1	1012.6
1981	266.5	27.0%	145.2	14.7%	349.3	35.4%	191.1	19.4%	13.1	1.3%	19.2	1.9%	984.4	985.7
1982	271.5	28.7%	101.0	10.7%	322.0	34.0%	145.7	15.4%	25.4	2.7%	0.0	0.0%	865.6	946.6
1983	233.9	23.9%	104.4	10.6%	334.6	34.1%	279.0	28.5%	32.6	3.3%	0.0	0.0%	984.5	980.3
1984	244.0	23.6%	111.2	10.7%	353.4	34.1%	251.9	24.3%	33.2	3.2%	0.0	0.0%	993.7	1,035.0
1985	262.7	24.0%	100.2	9.2%	354.4	32.4%	344.1	31.5%	19.2	1.8%	31.2	2.9%	1111.8	1,092.5
1986	263.9	22.7%	101.5	8.7%	364.0	31.3%	384.7	33.1%	13.2	1.1%	75.7	6.5%	1203.0	1,163.3
1987	295.3	24.6%	108.6	9.0%	373.4	31.1%	423.4	35.2%	23.0	1.9%	73.3	6.1%	1297.0	1,199.3
1988	301.8	24.1%	115.3	9.2%	381.9	30.4%	437.7	34.9%	7.0	0.6%	76.3	6.1%	1320.0	1,254.5
1989	301.5	24.1%	119.9	9.6%	397.5	31.8%	437.3	35.0%	21.4	1.7%	79.3	6.3%	1356.9	1,249.4
1990	289.3	22.6%	134.1	10.5%	405.5	31.7%	458.0	35.8%	28.6	2.2%	83.3	6.5%	1398.8	1,279.2
1991	290.9	22.3%	137.4	10.5%	420.5	32.2%	463.0	35.5%	26.5	2.0%	83.0	6.4%	1421.3	1,304.9
1992	288.3	21.8%	141.8	10.7%	415.4	31.5%	486.2	36.8%	28.5	2.2%	84.8	6.4%	1445.0	1,319.7
1993	328.5	24.0%	145.6	10.6%	428.7	31.2%	493.4	35.9%	28.0	2.0%	85.2	6.2%	1510.4	1,373.6
1994	330.7	24.1%	149.0	10.9%	427.2	31.2%	474.7	34.6%	24.8	1.8%	86.3	6.3%	1492.7	1,365.1
1995	314.5	22.4%	156.0	11.1%	433.7	30.9%	524.1	37.3%	28.9	2.1%	82.3	5.9%	1539.5	1,405.0
1996	352.5	24.6%	154.1	10.8%	416.8	29.1%	462.9	32.3%	23.8	1.7%	107.2	7.5%	1517.3	1,432.4
1997	361.6	23.0%	158.7	10.1%	446.7	28.4%	477.1	30.3%	21.6	1.4%	107.9	6.9%	1573.6	1,479.1
1998	374.0	23.1%	162.0	10.0%	462.1	28.5%	518.0	32.0%	26.7	1.6%	76.0	4.7%	1618.8	1,497.6
1999	402.6	24.3%	162.5	9.8%	466.9	28.1%	539.8	32.5%	7.1	0.4%	80.4	4.8%	1659.3	1,493.0
2000	432.2	25.6%	159.6	9.5%	481.1	28.5%	530.7	31.4%	4.6	0.3%	79.6	4.7%	1687.8	1477.1

[1]Includes energy resources (and losses) accountable to electricity generation, transmission, and distribution.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.1

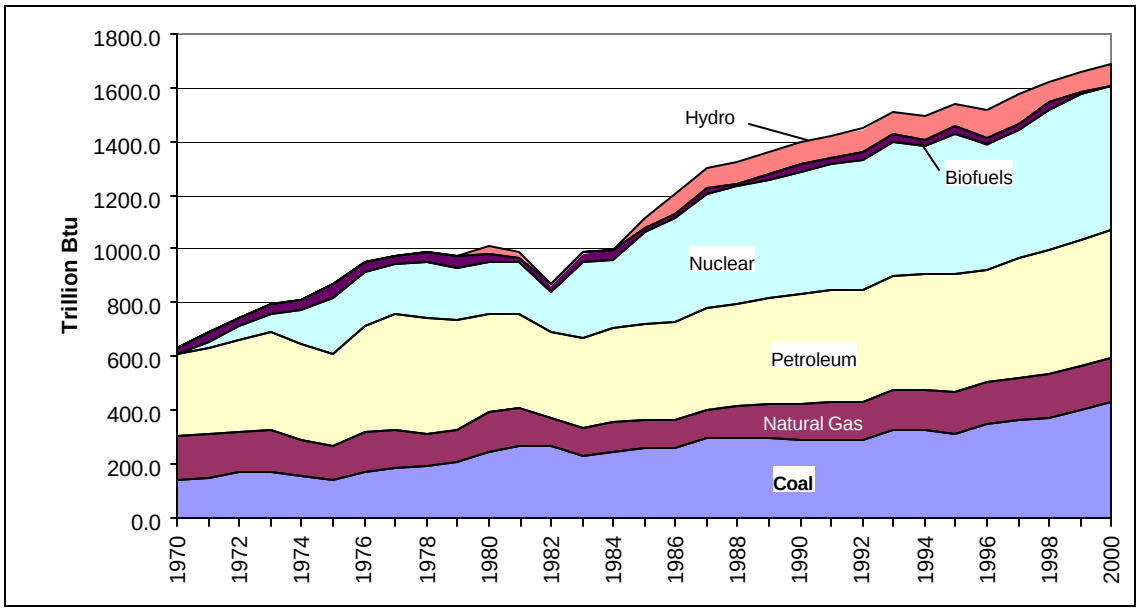
2000 Comparison of U.S. and South Carolina Energy Consumption by Fuel Source



Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.2

South Carolina Energy Consumption by Fuel Source, 1970-2000



Source: Energy Information Administration, *State Energy Data Report*.

Energy Consumption by Economic Sector

From 1970 to 2000, energy consumption in the South Carolina residential sector increased by 91.2% as compared with 32.6% for the U.S.; commercial sector energy use increased by 168.2% while the U.S. saw a 78.9% increase; industrial sector consumption increased by 86.9% as compared with a 29.1% increase in the U.S.; and the transportation sector saw an increase of 93.0% as compared with 67.1% for the nation. In 2000, the South Carolina industrial sector accounted for 41.1% of energy consumption, followed by the transportation sector with 25.9%, the residential sector with 19.3%, and the commercial sector with 13.6%. This closely conforms to the national trend in end-use sector consumption.

Table 1.2

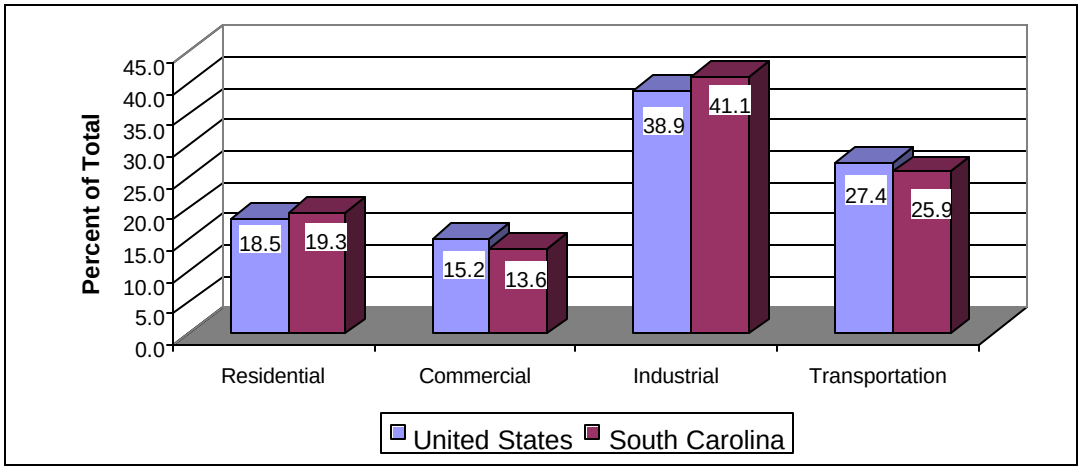
South Carolina Annual Consumption by Economic Sector, 1970-2000
(Trillion Btu and Percent of Total)

Year	Residential		Commercial		Industrial		Transportation		TOTAL[1]
1970	149.2	20.0%	74.9	10.0%	325.1	43.5%	198.6	26.6%	747.8
1975	166.2	19.7%	110.8	13.1%	338.9	40.1%	229.4	27.1%	845.4
1976	181.8	19.6%	135.0	14.6%	363.5	39.3%	245.1	26.5%	925.4
1977	191.1	19.8%	138.2	14.3%	380.7	39.5%	253.2	26.3%	963.2
1978	190.0	19.8%	134.7	14.1%	366.7	38.3%	265.9	27.8%	957.3
1979	173.7	18.3%	123.5	13.0%	389.4	41.0%	263.8	27.8%	950.4
1980	198.3	19.6%	134.3	13.3%	431.9	42.7%	248.1	24.5%	1,012.6
1981	188.3	19.1%	124.2	12.6%	427.0	43.3%	246.2	25.0%	985.7
1982	190.0	20.1%	129.0	13.6%	381.4	40.3%	246.2	26.0%	946.6
1983	192.6	19.7%	135.5	13.9%	396.7	40.6%	252.0	25.8%	976.8
1984	200.9	19.4%	131.2	12.7%	437.3	42.3%	265.6	25.7%	1,035.0
1985	218.2	20.0%	136.9	12.5%	472.4	43.2%	265.0	24.3%	1,092.5
1986	232.6	20.0%	145.2	12.5%	510.2	43.9%	275.3	23.7%	1,163.3
1987	243.8	20.3%	151.3	12.6%	536.4	44.6%	270.5	22.5%	1,202.0
1988	245.4	19.6%	157.3	12.5%	554.1	44.2%	297.7	23.7%	1,254.5
1989	247.9	19.8%	159.7	12.8%	551.5	44.1%	290.3	23.2%	1,249.4
1990	240.5	18.8%	160.6	12.6%	567.9	44.4%	310.1	24.2%	1,279.1
1991	248.3	19.0%	163.1	12.5%	577.6	44.3%	315.9	24.2%	1,304.9
1992	248.7	18.8%	165.0	12.5%	597.9	45.3%	308.2	23.4%	1,319.8
1993	271.5	19.8%	175.2	12.8%	612.0	44.6%	315.0	22.9%	1,373.7
1994	257.7	18.8%	175.6	12.8%	615.2	44.9%	321.6	23.5%	1,370.1
1995	275.7	19.6%	184.4	13.1%	622.9	44.3%	322.0	22.9%	1,405.0
1996	292.1	20.4%	191.5	13.4%	620.3	43.3%	328.5	22.9%	1,432.4
1997	274.9	18.6%	193.3	13.1%	667.7	45.1%	343.2	23.2%	1,479.1
1998	292.2	19.5%	213.1	14.2%	628.4	42.0%	363.8	24.3%	1,497.5
1999	288.1	19.3%	210.3	14.1%	618.2	41.4%	376.4	25.2%	1,493.0
2000	285.3	19.3%	200.9	13.6%	607.6	41.1%	383.2	25.9%	1,477.1

[1]Includes energy resources (and losses) accountable to electricity generation, transmission, and distribution.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.3

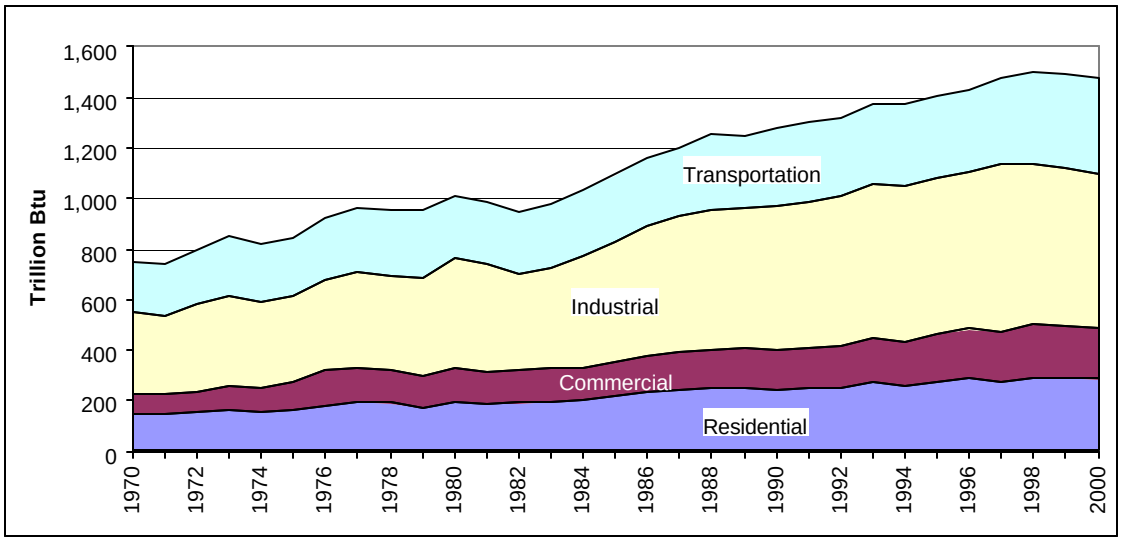
2000 U.S. and South Carolina Energy Consumption Estimates by Economic Sector



Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.4

South Carolina Energy Consumption Estimates by Economic Sector, 1970-2000



Source: Energy Information Administration, *State Energy Data Report*.

Residential Energy Consumption

South Carolina residential end-use energy consumption increased by 43.9% from 1980-2000, while the United States saw an increase of only 14.1% during the same period. Electricity accounts for the majority of residential energy consumption in South Carolina (62.7%), but accounts for only 36.3% on the national level. Residential natural gas use in South Carolina has declined slightly since its peak years of the mid-1970's, accounting for 21.7% of energy consumption. On the other hand, natural gas consumption accounts for 45.6% of residential energy consumption in the United States. Petroleum comprises 10.1% of residential energy consumption in South Carolina (13.5% in U.S.), and biofuels accounts for 5.5% in South Carolina (3.9% in U.S.). South Carolina ranked 24th in the nation in total energy consumption in the residential sector. It should be noted that propane is included in natural gas usage.

Table 1.3

South Carolina Residential Energy Use Estimates by Fuel Source
1980-2000
(Trillions of Btu and Percent of Total)

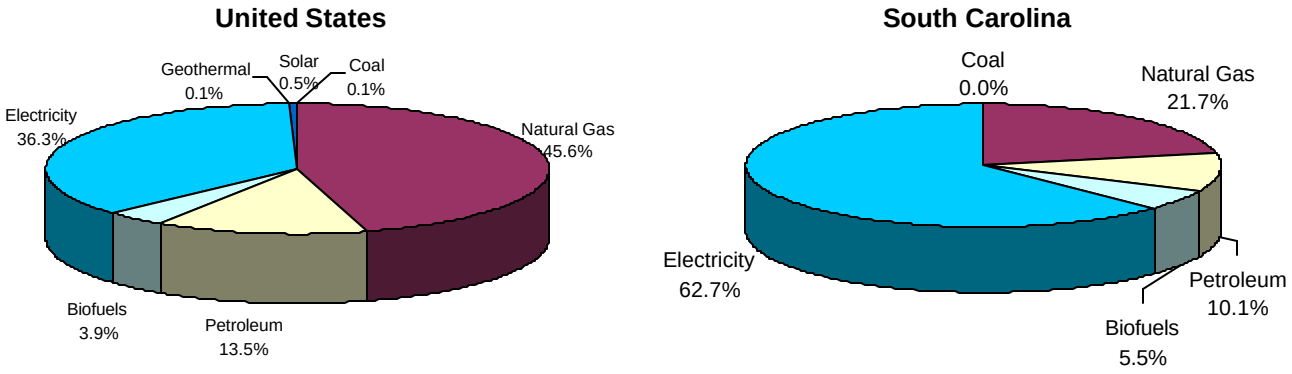
Year	Coal		Natural Gas		Petroleum		Biofuels		Electricity		Total End Use	Total[1]
1979	0.4	0.5%	17.9	22.5%	22.4	28.1%	0.0	0.0%	39.0	48.9%	79.7	173.7
1980	1.7	1.8%	19.5	20.7%	21.6	23.0%	8.3	8.8%	42.9	45.6%	94.0	198.3
1981	0.9	1.1%	19.4	23.7%	17.1	20.9%	0.0	0.0%	44.6	54.4%	82.0	188.3
1982	1.0	1.3%	18.1	22.8%	14.3	18.0%	0.0	0.0%	46.0	57.9%	79.4	190.0
1983	1.5	1.8%	19.2	23.1%	15.3	18.4%	0.0	0.0%	47.1	56.7%	83.1	196.2
1984	1.0	1.2%	19.7	23.1%	14.8	17.4%	0.0	0.0%	49.7	58.3%	85.2	200.9
1985	0.6	0.6%	16.9	16.8%	20.3	20.2%	12.9	12.8%	50.0	49.7%	100.7	218.2
1986	1.9	1.8%	18.0	17.0%	18.6	17.5%	12.6	11.9%	55.0	51.8%	106.1	232.6
1987	1.1	1.0%	20.8	18.6%	21.9	19.6%	10.5	9.4%	57.7	51.5%	112.0	243.8
1988	1.1	1.0%	21.3	18.9%	21.0	18.6%	10.9	9.7%	58.6	51.9%	112.9	245.4
1989	0.2	0.2%	21.0	18.4%	21.9	19.2%	11.3	9.9%	59.6	52.3%	114.0	247.9
1990	0.1	0.1%	18.9	18.1%	15.1	14.5%	7.9	7.6%	62.3	59.7%	104.3	240.5
1991	0.2	0.2%	20.1	18.4%	17.1	15.6%	8.3	7.6%	63.8	58.3%	109.5	248.3
1992	0.3	0.3%	23.0	20.8%	14.2	12.8%	8.7	7.9%	64.6	58.3%	110.8	248.7
1993	1.0	0.8%	25.1	20.5%	16.2	13.2%	9.5	7.8%	70.6	57.7%	122.4	271.5
1994	0.6	0.5%	24.2	20.9%	13.9	12.0%	9.3	8.0%	67.9	58.6%	115.9	257.7
1995	0.2	0.2%	25.8	20.9%	14.2	11.5%	10.3	8.3%	73.0	59.1%	123.5	275.7
1996	0.2	0.2%	30.3	23.0%	14.4	10.9%	10.3	7.8%	76.8	58.2%	132.0	292.1
1997	*	N/A	26.5	21.8%	13.9	11.4%	7.4	6.1%	73.7	60.7%	121.5	274.9
1998	0.2	0.2%	26.3	20.9%	12.8	10.2%	6.5	5.2%	80.4	63.8%	126.0	292.2
1999	2.0	1.6%	26.5	20.8%	13.2	10.3%	7.0	5.5%	80.9	63.4%	127.6	288.1
2000	0.0	0.0%	29.9	21.7%	13.9	10.1%	7.5	5.5%	86.2	62.7%	137.5	285.3

[1]Includes energy resources (and losses) accountable to electricity generation, transmission, and distribution.
*Btu value less than 0.05 and physical unit value less than 0.5.

Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.5

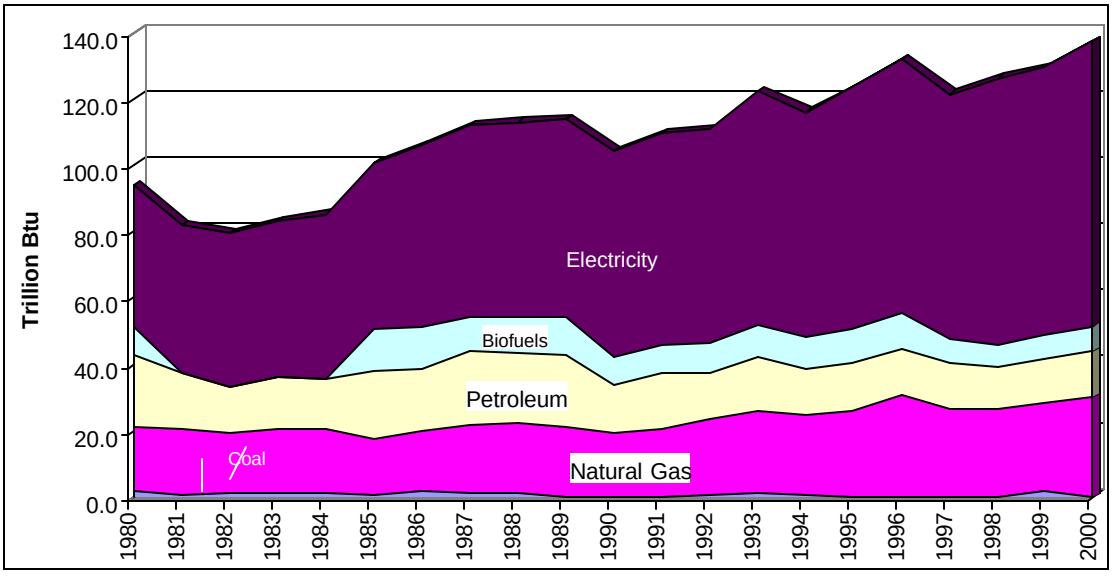
2000 Comparison of U.S. and South Carolina Residential Energy Consumption



Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.6

South Carolina Residential Energy Consumption, 1980-2000



Source: Energy Information Administration, *State Energy Data Report*.

South Carolina Commercial Sector Energy Consumption

South Carolina energy consumption in the commercial sector increased 49.6% from 1980 to 2000. In 2000, electricity accounted for 67.6% of end-use energy consumption in the South Carolina commercial sector, as compared with 48.5% in the United States. Natural gas makes up 24.4% of the commercial energy consumption in South Carolina, while the United States is much higher with 40.4%. Petroleum accounts for 7.0% of commercial energy consumption in South Carolina and 9.2% in the United States. Coal, biofuels and geothermal consumption is negligible on both the South Carolina and national levels. South Carolina ranks 26th in the nation in energy consumption in the commercial sector.

Table 1.4

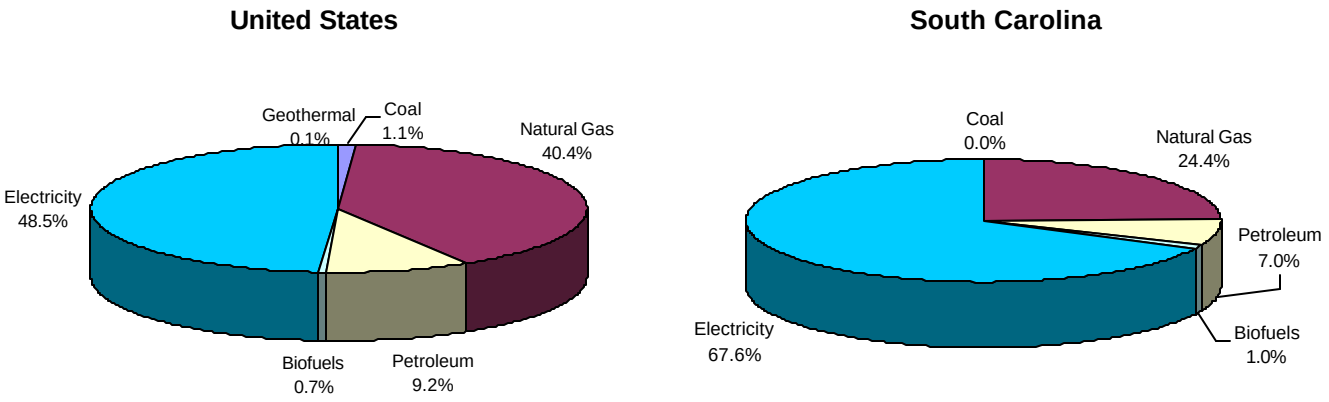
South Carolina Commercial Energy Use Estimates by Fuel Source, 1980-2000
(Trillion Btu and Percent of Total)

Year	Coal		Natural Gas		Petroleum		Biofuels (Wood/Waste)		Electricity		Total End Use	Total[1]
1980	3.1	5.0%	23.6	38.1%	5.4	8.7%	0.2	0.3%	29.7	47.9%	62.0	136.9
1981	1.6	2.9%	19.9	35.6%	5.7	10.2%	N/A	0.0%	28.7	51.3%	55.9	124.2
1982	1.9	3.5%	16.0	29.7%	4.8	8.9%	N/A	0.0%	31.2	57.9%	53.9	129.0
1983	2.8	4.7%	17.0	28.6%	8.0	13.4%	N/A	0.0%	31.7	53.3%	59.5	135.5
1984	1.8	3.1%	17.1	29.4%	7.8	13.4%	N/A	0.0%	31.4	54.0%	58.1	131.2
1985	1.1	1.9%	15.7	26.9%	8.1	13.9%	0.3	0.0%	33.4	57.3%	58.3	136.9
1986	3.6	5.7%	16.4	26.2%	6.9	11.0%	N/A	0.0%	35.8	57.1%	62.7	145.2
1987	2.0	3.1%	17.7	27.1%	8.1	12.4%	N/A	0.0%	37.6	57.5%	65.4	151.3
1988	2.1	3.1%	17.9	26.2%	9.1	13.3%	N/A	0.0%	39.3	57.5%	68.4	157.3
1989	0.3	0.4%	17.0	25.3%	8.5	12.7%	N/A	0.0%	41.3	61.5%	67.1	159.7
1990	0.1	0.2%	15.8	24.0%	6.1	9.3%	0.5	0.0%	43.3	65.7%	65.9	160.9
1991	0.4	0.6%	16.2	24.6%	5.1	7.7%	0.5	0.0%	44.4	67.4%	65.9	163.1
1992	0.5	0.7%	17.1	24.9%	6.2	9.0%	0.6	0.0%	44.9	65.4%	68.7	164.6
1993	1.7	2.3%	17.5	23.5%	6.8	9.1%	0.8	1.1%	47.7	64.0%	74.5	175.2
1994	0.9	1.2%	18.4	24.7%	5.9	7.9%	0.8	1.1%	48.4	65.1%	74.4	175.6
1995	0.3	0.4%	19.4	24.6%	7.6	9.6%	0.8	1.0%	50.7	64.3%	78.8	184.4
1996	0.3	0.4%	20.9	25.5%	7.5	9.1%	0.8	1.0%	52.5	64.0%	82.0	191.5
1997	*	N/A	20.2	24.5%	7.9	9.6%	0.8	1.0%	53.4	64.9%	82.3	193.3
1998	0.4	0.4%	20.5	22.5%	10.6	11.6%	0.8	0.9%	59.0	64.6%	91.3	213.1
1999	3.8	4.1%	21.2	22.7%	7.8	8.4%	1.0	1.1%	59.7	63.9%	93.4	210.3
2000	0.0	0.0	22.7	24.4%	6.5	7.0%	0.9	1.0%	62.9	67.6%	93.0	200.9

[1]Includes energy resources (and losses) accountable to electricity generation, transmission, and distribution.
*Btu value less than 0.05 and physical unit value less than 0.5.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.7

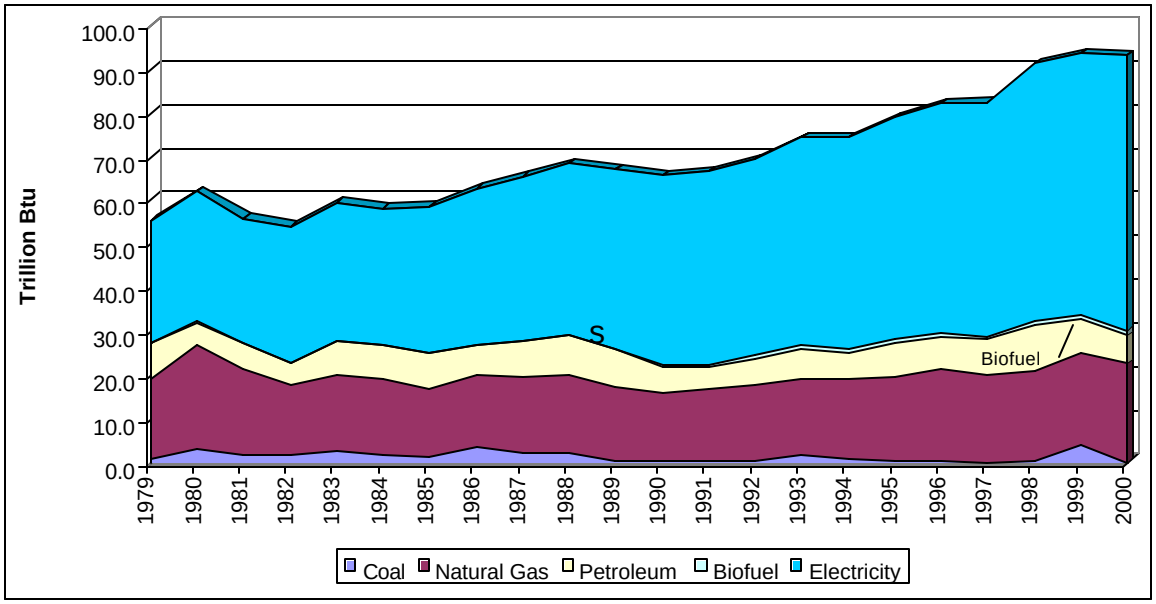
2000 Comparison of U.S. and South Carolina Commercial Sector Energy Consumption



Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.8

South Carolina Commercial Sector Energy Consumption, 1980-2000



Source: Energy Information Administration, *State Energy Data Report*.

South Carolina Industrial Sector Energy Consumption

South Carolina experienced an increase of 40.7% in industrial energy consumption between 1980-2000, as compared with 18.6% in the United States. As a result, South Carolina ranks 20th in the nation in industrial energy consumption as indicated by data for 2000. Unlike the residential and commercial sectors, which rely primarily on electricity, energy consumption in South Carolina's industrial sector is divided between electricity (27.5%) and natural gas (24.4%). Petroleum accounted for 18.6%, biofuels 17.3%, and coal 12.2% as fuel sources in the industrial sector in 2000. On the national level, natural gas (33.9%) and petroleum (28.8%) were the leading fuel sources for the industrial sector.

Table 1.5

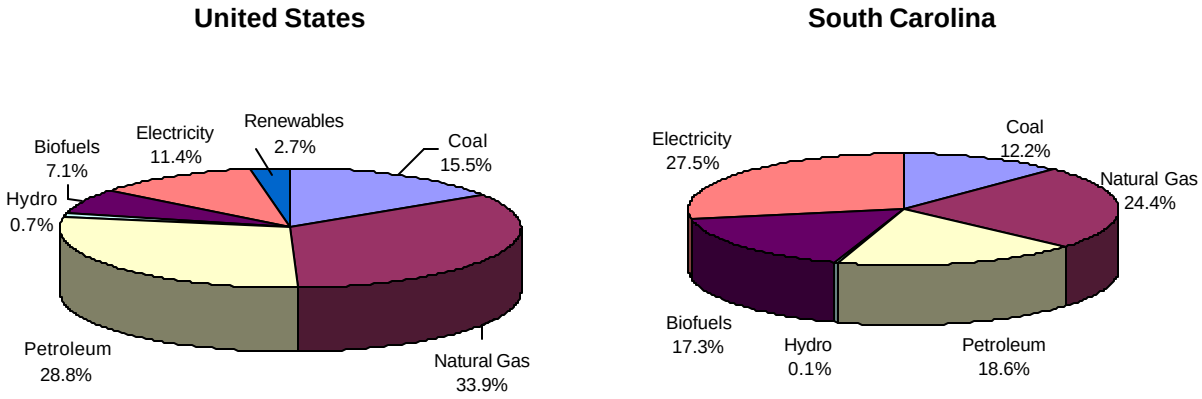
South Carolina Industrial Energy Use Estimates by Type of Fuel
1980-2000
(Trillions of Btu and Percent of Total)

Year	Coal		Natural Gas		Petroleum		Hydro		Biofuels		Electricity		Total End Use	Total Resource[1]
1980	44.0	14.7%	95.1	31.8%	77.4	25.9%	0.5	0.2%	27.7	9.3%	54.5	18.2%	299.2	431.9
1981	50.4	18.0%	97.5	34.8%	70.6	25.2%	0.5	0.2%	0.0	0.0%	61.5	21.9%	280.5	427.0
1982	56.1	23.7%	63.4	26.8%	56.8	24.0%	0.5	0.2%	0.0	0.0%	60.1	25.4%	236.9	381.4
1983	54.4	22.3%	64.5	26.4%	61.1	25.0%	0.5	0.2%	0.0	0.0%	63.7	26.1%	244.2	396.7
1984	55.1	20.6%	71.3	26.7%	67.1	25.1%	0.5	0.2%	0.0	0.0%	73.1	27.4%	267.1	437.3
1985	62.8	21.1%	64.8	21.8%	62.3	20.9%	0.5	0.2%	32.5	10.9%	74.5	25.1%	297.4	472.4
1986	61.5	18.6%	63.3	19.1%	65.0	19.6%	0.5	0.2%	63.1	19.1%	77.8	23.5%	331.2	447.1
1987	64.2	18.4%	67.2	19.3%	72.3	20.7%	0.5	0.1%	62.8	18.0%	82.0	23.5%	349.0	473.5
1988	65.2	17.7%	71.0	19.3%	83.8	22.8%	0.5	0.1%	65.4	17.8%	82.3	22.4%	368.2	488.7
1989	62.0	17.0%	76.5	20.9%	75.5	20.7%	0.4	0.1%	68.0	18.6%	82.9	22.7%	365.3	483.6
1990	58.0	15.1%	89.3	23.3%	76.3	19.9%	0.6	0.2%	75.0	19.6%	84.3	22.0%	383.5	567.9
1991	55.8	14.3%	88.1	22.6%	84.4	21.7%	0.5	0.1%	74.2	19.1%	86.5	22.2%	389.5	577.6
1992	54.8	13.5%	96.9	23.8%	88.9	21.9%	0.5	0.1%	75.6	18.6%	89.8	22.1%	406.5	597.9
1993	60.3	14.4%	98.3	23.5%	92.4	22.1%	0.6	0.1%	75.0	17.9%	91.7	21.9%	418.3	612.0
1994	58.5	14.0%	100.5	24.1%	86.8	20.8%	0.7	0.2%	76.3	18.3%	94.7	22.7%	417.5	615.2
1995	55.1	13.2%	101.0	24.2%	91.5	21.9%	0.7	0.2%	71.3	17.1%	98.3	23.5%	417.9	622.9
1996	50.1	12.1%	98.4	23.8%	67.9	16.4%	0.7	0.2%	96.2	23.3%	99.6	24.1%	412.9	620.3
1997	50.5	11.3%	106.1	23.8%	82.0	18.4%	0.4	0.1%	99.8	22.4%	106.7	24.0%	445.5	667.7
1998	49.1	12.1%	105.8	26.1%	73.4	18.1%	0.7	0.2%	68.8	17.0%	107.8	26.6%	405.6	628.4
1999	46.6	11.5%	105.9	26.2%	68.4	17.0%	0.4	0.1%	72.6	18.0%	109.6	27.2%	403.5	618.2
2000	50.2	12.2%	100.5	24.3%	76.8	18.6%	0.4	0.1%	71.2	17.2%	113.6	27.5%	412.8	607.6

[1]Includes energy resources (and losses) accountable to electricity generation, transmission, and distribution.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.9

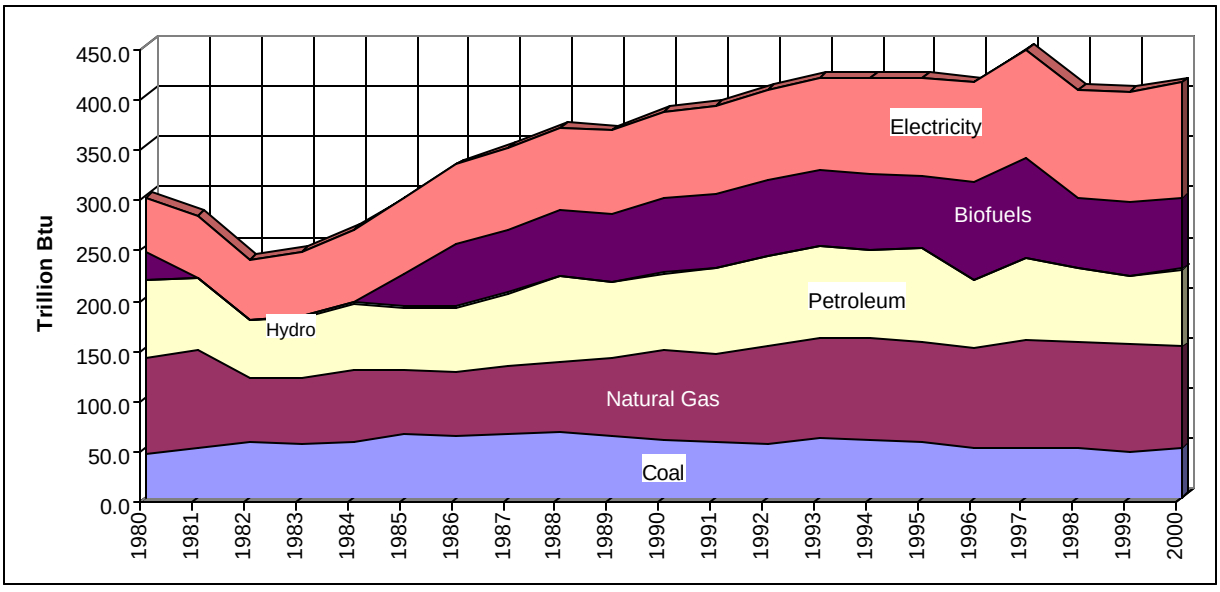
2000 Comparison of U.S. and South Carolina Industrial Sector Energy Consumption



Source: Energy Information Administration, *State Energy Data Report*.

Figure 1.10

South Carolina Industrial Sector Energy Consumption, 1980-2000



Source: Energy Information Administration, *State Energy Data Report*.

South Carolina Transportation Sector Energy Consumption

South Carolinians increased their consumption of energy use in the transportation sector by 54.5% from 1980 to 2000, as compared with 36.5% on the national level. Distillate Fuel had the highest increase with 149.6% during this period, followed by motor gasoline with an increase of 48.5 percent. In 2000, motor gasoline accounted for 71.6% of the energy use in the transportation sector in South Carolina as compared with 59.1% on the national level. Distillate Fuel accounted for 23.4%, while accounting for 19.7% on the national level. As indicated in Table 1.6 below, the other fuel sources play a very negligible role in energy consumption in the South Carolina transportation sector. In 2000, South Carolina ranked 26th in the nation for energy energy consumption in the transportation sector.

Table 1.6

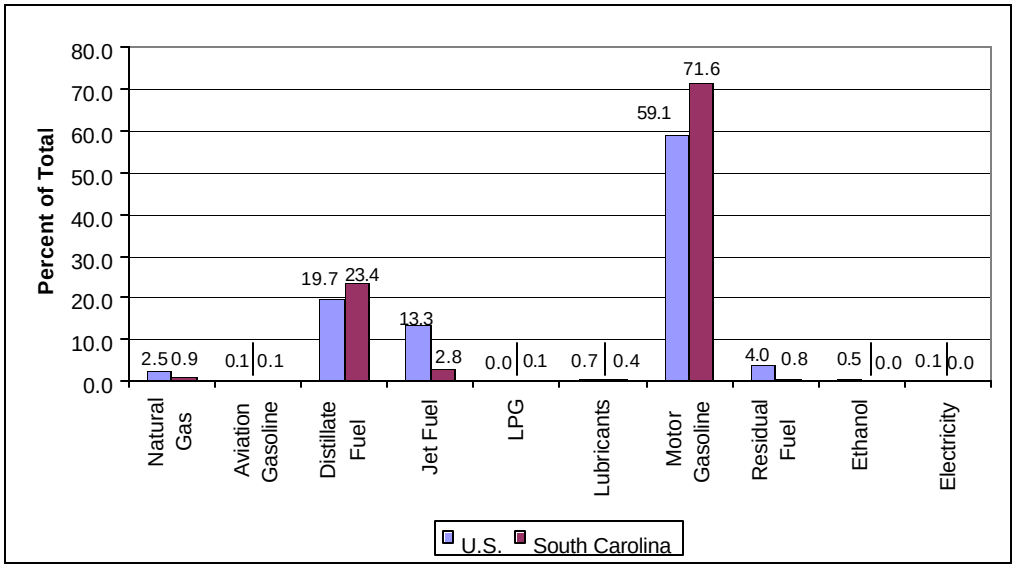
South Carolina Transportation Energy Use Estimates by Type of Fuel
1970-2000-
(Trillion Btu and Percent of Total)

Year	Natural Gas	Aviation Gasoline	Distillate Fuel	Jet Fuel	LPG	Lubricants	Motor Gasoline	Residual Fuel	Ethanol	TOTAL
1980	3.1	0.8	35.9	16.6	0.1	1.6	184.8	5.3	0.0	248.1
1981	3.3	0.7	33.0	15.5	0.3	1.5	185.3	6.7	0.0	246.2
1982	3.0	0.6	36.4	14.8	0.3	1.4	184.6	5.1	0.0	246.2
1983	2.7	0.7	40.4	13.7	0.3	1.4	186.8	5.9	0.0	252.0
1984	2.7	0.6	45.4	16.6	0.5	1.5	192.4	5.9	0.0	265.6
1985	2.3	0.7	45.8	17.2	0.5	1.4	193.2	3.8	0.0	265.0
1986	2.4	0.8	47.6	17.2	0.3	1.4	201.8	3.8	0.0	275.3
1987	2.5	0.6	47.0	17.3	0.3	1.6	197.6	3.7	0.0	270.5
1988	2.6	0.6	49.9	17.5	0.3	1.5	220.4	4.9	0.0	297.7
1989	2.6	0.6	47.4	16.9	0.3	1.6	216.6	4.2	0.0	290.3
1990	2.9	0.5	63.2	16.0	0.3	1.6	222.2	3.2	0.5	310.1
1991	2.9	0.9	67.2	18.7	0.3	1.4	219.4	5.0	0.0	315.9
1992	3.0	1.1	60.9	14.1	0.3	1.5	223.9	3.4	0.0	308.2
1993	2.8	0.9	59.8	11.1	0.3	1.5	234.6	4.0	0.0	315.0
1994	2.7	0.6	73.3	8.1	0.5	1.6	234.3	0.5	0.0	321.6
1995	3.0	0.6	65.4	5.8	0.3	1.5	242.6	2.8	0.0	322.0
1996	3.2	0.3	66.9	7.3	0.2	1.5	244.9	4.2	0.0	328.5
1997	3.0	0.3	71.8	7.5	0.2	1.6	255.2	3.5	0.0	343.2
1998	3.3	0.3	82.8	8.1	0.2	1.7	264.6	2.8	0.0	363.8
1999	3.7	0.5	85.8	8.7	0.1	1.7	273.0	2.8	0.0	376.4
2000	3.6	0.4	89.6	10.6	0.2	1.7	274.4	2.9	0.0	383.2

Source: Energy Information Administration, *State Energy Data 2000*.

Figure 1.11

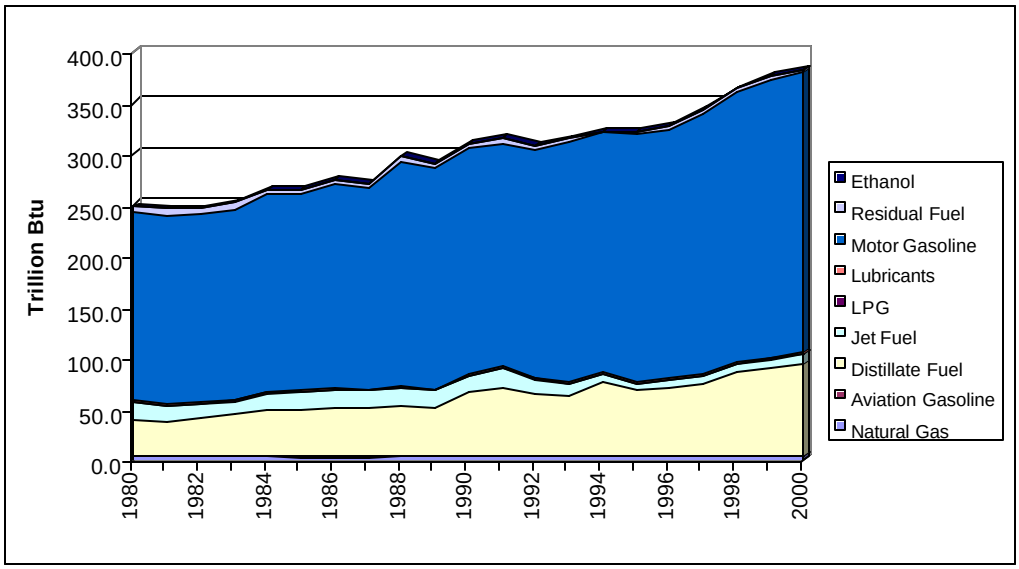
2000 Comparison of U.S. and South Carolina Transportation Energy Consumption



Source: Energy Information Administration, *State Energy Data 2000*.

Figure 1.12

South Carolina Transportation Sector Energy Consumption, 1980-2000



Source: Energy Information Administration, *State Energy Data 2000*.

South Carolina Energy Expenditures

Expenditures by Economic Sector

South Carolinians spent $10.2 billion on energy in 2000, maintaining its ranking of 25th in the nation as in 1999. Moreover, South Carolina ranked 23rd in the nation in energy expenditures per person at $2,536 ($2,499 for the U.S.). Since 1970, energy expenditures have increased by 947.3% in nominal dollar terms while energy consumption increased by 97.5%. The transportation sector accounts for the largest share of energy expenditures with 40.0% in 2000, followed by the residential sector with 23.5%, the industrial sector with 22.8%, and the commercial sector with 13.7%. This closely reflects the trend on the national level, where the transportation sector also accounts for the largest share of energy expenditures with 40.1%, followed by the residential sector with 22.1%, the industrial sector with 21.7% and the commercial sector with 16.1%.

Table 1.6

South Carolina Economic Sector Energy Expenditures, 1970-2000 (Million of Nominal Dollars)

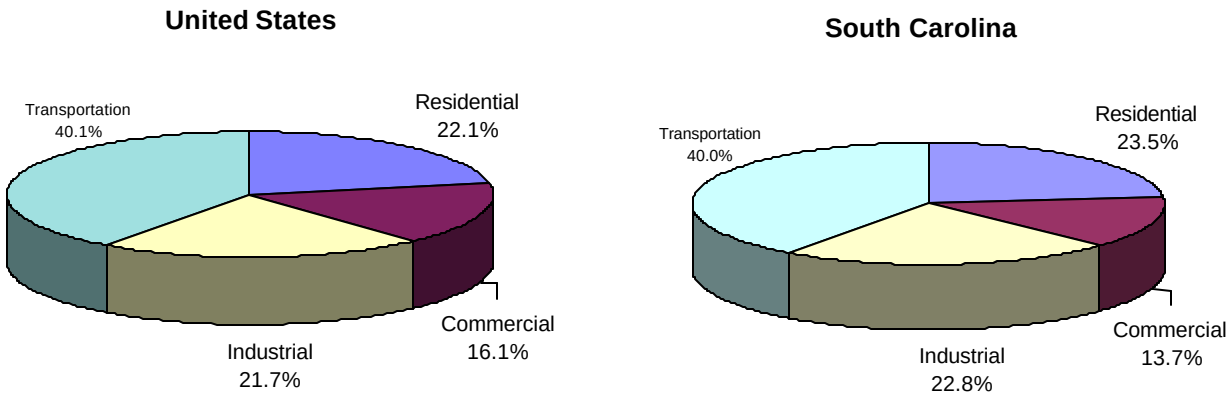
Year	Residential	Commercial	Industrial	Transportation	Total*	Percent Change
1970	224.2	93.6	197.0	457.0	971.7	
1975	440.0	251.6	512.7	916.4	2,120.8	12.6%
1976	544.3	312.9	640.0	1,035.5	2,532.8	19.4%
1977	635.9	372.3	767.1	1,140.9	2,916.2	15.1%
1978	652.8	391.3	791.4	1,229.3	3,064.8	5.1%
1979	678.1	405.5	983.0	1,723.7	3,790.3	23.7%
1980	842.8	473.6	1,186.0	2,307.1	4,809.6	26.9%
1981	965.2	533.1	1,510.6	2,576.1	5,585.0	16.1%
1982	1,054.5	616.7	1,387.9	2,431.1	5,490.2	-1.7%
1983	1,161.8	678.1	1,491.0	2,193.2	5,524.1	0.6%
1984	1,234.0	696.3	1,676.5	2,235.9	5,842.6	5.8%
1985	1,322.1	749.2	1,681.1	2,202.9	5,955.3	1.9%
1986	1,429.6	791.5	1,560.5	1,689.2	5,470.8	-8.1%
1987	1,511.6	834.2	1,682.8	1,816.7	5,845.2	6.8%
1988	1,546.2	857.1	1,694.6	1,987.0	6,084.9	4.1%
1989	1,575.1	888.8	1,719.9	2,141.4	6,325.1	3.9%
1990	1,583.8	911.6	1,776.6	2,608.9	6,881.0	8.8%
1991	1,659.0	929.9	1,789.4	2,541.1	6,919.3	0.6%
1992	1,643.3	942.5	1,815.2	2,412.7	6,813.7	-1.5%
1993	1,826.1	1,007.7	1,873.5	2,387.3	7,094.5	4.1%
1994	1,819.8	1,044.2	1,877.7	2,495.5	7,237.2	2.0%
1995	1,952.1	1,096.1	1,921.2	2,581.1	7,550.5	4.3%
1996	2,062.9	1,153.7	1,926.0	2,817.8	7,960.5	5.4%
1997	1,999.2	1,168.6	2,070.0	2,885.3	8,123.1	2.0%
1998	2,109.2	1,257.1	1,900.9	2,613.8	7,881.0	-3.0%
1999	2,161.8	1,284.1	1,918.7	2,948.6	8,313.2	5.5%
2000	2,386.8	1,398.2	2,317.6	4,073.7	10,176.3	22.4%

*Total includes energy input estimates at electric utilities.

Source: Energy Information Administration, *State Energy Price and Expenditure Report*.

Figure 1.11

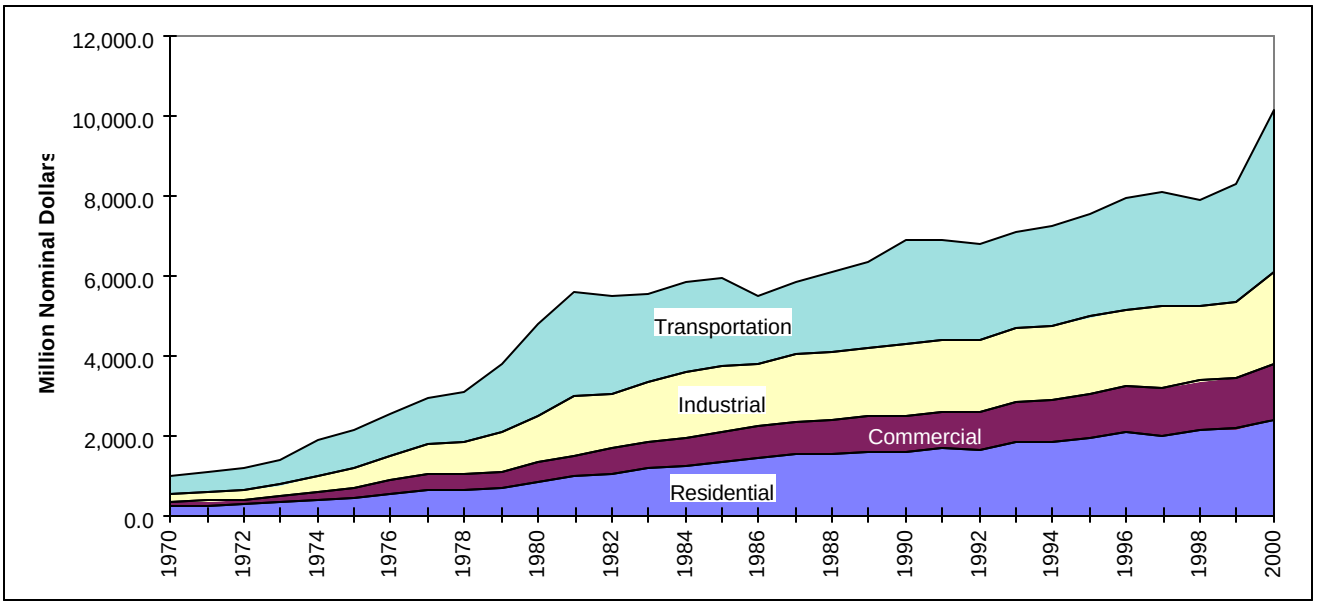
2000 Comparison of U.S. and South Carolina Energy Expenditure Estimates by Sector



Source: Energy Information Administration, *State Energy Price and Expenditure Report*.

Figure 1.12

South Carolina End-Use Energy Expenditures by Sector, 1970-2000



Source: Energy Information Administration, *State Energy Price and Expenditure Report*.

Expenditures by Fuel Source

For the first time since 1990, South Carolina petroleum expenditures surpassed that of electricity in 2000. Petroleum expenditures accounted for 43.8% in South Carolina with a ranking of 26th in the nation. Electricity accounted for 39.5% of expenditures in South Carolina and ranked 20th in the nation. South Carolina ranked 34th in the nation for natural gas expenditures, and 16th for coal expenditures.

Table 1.7

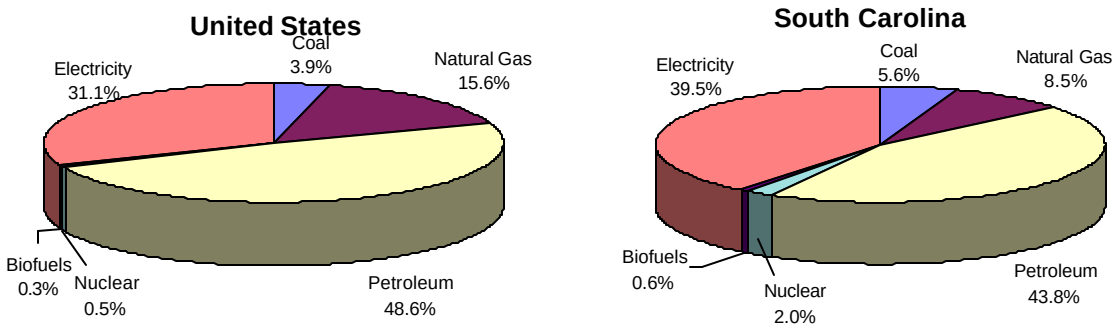
South Carolina Expenditure Estimates by Fuel Source, 1970-2000
(Million of Nominal Dollars)

Year	Coal	Natural Gas	Petroleum	Nuclear	Biofuels	Electricity	Total Energy[1]
1970	65.3	91.4	569.7	*	15.6	294.7	971.7
1971	78.5	99.9	630.9	4.9	N/A	341.5	1,070.4
1972	86.8	104.3	687.5	9.3	N/A	404.6	1,193.7
1973	91.0	122.9	790.1	12.3	N/A	477.0	1,378.1
1974	209.0	126.3	1,132.8	20.4	N/A	628.7	1,883.5
1975	174.7	143.3	1,166.8	40.6	18.0	782.8	2,120.8
1976	189.9	227.1	1,401.2	40.1	N/A	900.8	2,532.8
1977	242.1	272.7	1,612.6	49.3	N/A	1,063.3	2,916.2
1978	275.1	257.6	1,684.7	67.8	N/A	1,155.9	3,064.8
1979	307.9	310.5	2,248.5	71.7	N/A	1,247.7	3,790.3
1980	392.2	441.2	2,929.4	83.4	18.4	1,412.5	4,809.6
1981	486.0	552.8	3,268.6	85.5	18.6	1,725.9	5,585.0
1982	524.5	443.1	2,930.3	70.3	18.9	1,996.1	5,490.2
1983	455.2	520.1	2,725.1	140.6	19.3	2,156.7	5,524.1
1984	478.0	577.4	2,797.6	152.5	25.4	2,337.2	5,842.6
1985	493.6	495.3	2,802.4	214.5	27.1	2,523.7	5,955.3
1986	480.7	435.6	2,147.2	233.9	30.9	2,741.1	5,470.8
1987	512.9	488.0	2,308.5	269.0	28.3	2,909.0	5,845.2
1988	526.8	479.3	2,513.9	257.5	29.5	2,955.0	6,084.9
1989	514.1	495.2	2,678.2	251.7	20.6	3,038.0	6,325.1
1990	499.0	525.9	3,138.0	242.8	18.9	3,113.3	6,881.0
1991	478.2	492.8	3,119.2	240.5	18.0	3,211.3	6,919.3
1992	451.3	549.8	2,927.3	241.2	17.3	3,230.5	6,813.7
1993	528.2	598.5	2,905.7	247.1	18.1	3,472.0	7,094.5
1994	528.1	617.7	2,995.9	250.0	20.3	3,509.2	7,237.2
1995	486.9	621.3	3,131.1	267.8	16.4	3,703.0	7,550.5
1996	533.3	710.7	3,343.1	225.7	29.8	3,801.6	7,960.5
1997	539.1	741.3	3,518.0	201.7	26.5	3,770.9	8,123.1
1998	556.9	697.5	3,111.1	215.4	11.8	4,008.5	7,881.0
1999	590.9	718.0	3,429.1	226.3	20.7	4,085.5	8,313.2
2000	613.3	934.2	4,809.2	218.7	60.4	4,331.8	10,176.3

*Denotes value is less than 0.05 million nominal dollars.
[1]Total energy includes electric utility fuel losses.
Source: Energy Information Administration, *State Energy Price and Expenditure Report*.

Figure 1.13

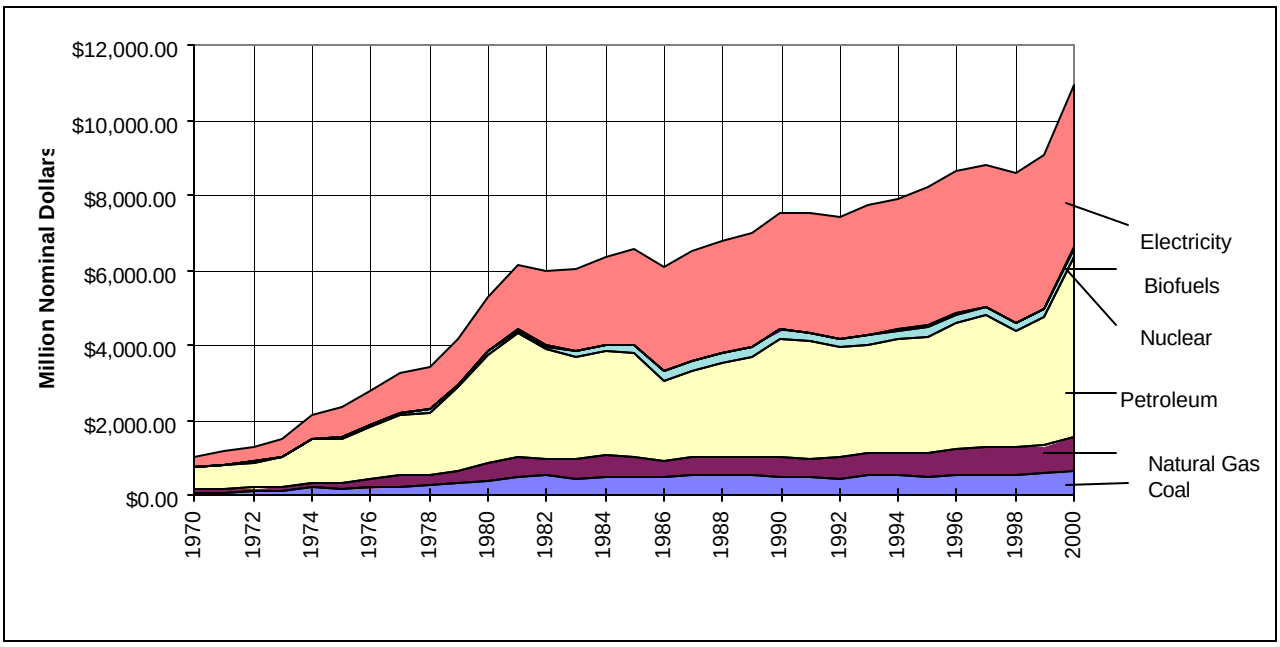
2000 Comparison of U.S. and South Carolina Energy Expenditure Estimates by Fuel Source



Source: Energy Information Administration, *State Energy Data 2000*.

Figure 1.14

South Carolina Energy Expenditure Estimates by Fuel Source, 1970-2000



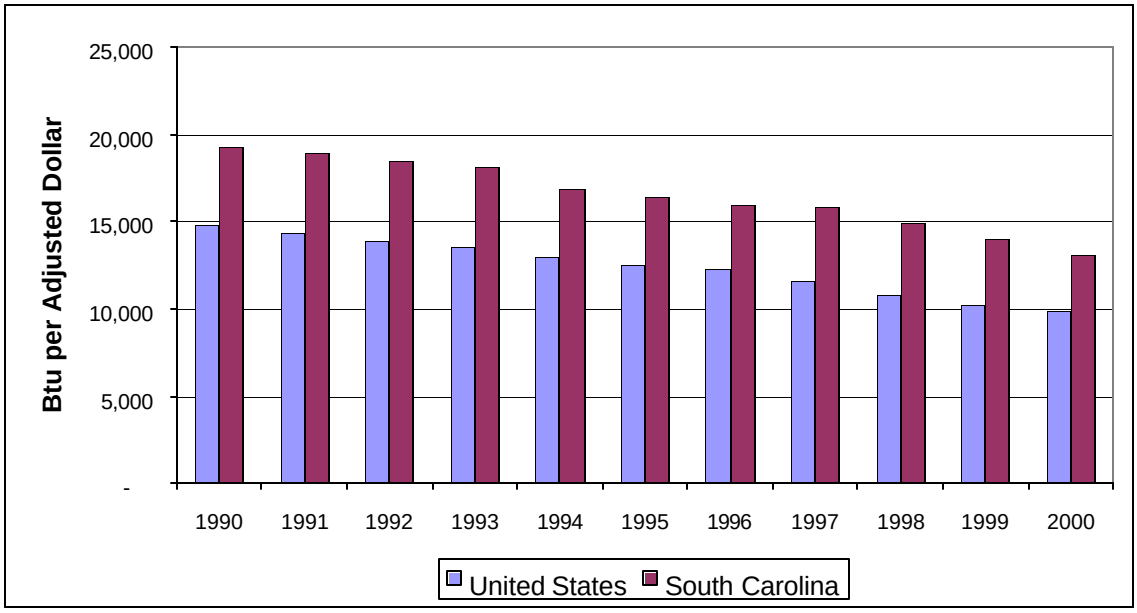
*The total expenditures in this chart do not include the losses due to electric utility fuel, thus the overall expenditure total is higher.
Source: Energy Information Administration, *State Energy Data 2000*.

Energy Consumption per Dollar Gross State Product/Gross Domestic Product

When considering energy efficiency as measured in energy consumption per dollar of gross state product, South Carolina has made significant progress over the past five years, with a decrease of 18.3 percent. Since 1990, the economy has grown somewhat faster than energy consumption, resulting in a 32.6% decrease (from 19,318 to 13,028) in Btu consumed per dollar of economic output (gross state product, adjusted for inflation). Nevertheless, South Carolina's energy efficiency trails behind the national average of 9,879 Btu per dollar of gross domestic product (GDP), which is nearly 25% lower than South Carolina's energy efficiency index.

Figure 1.15

South Carolina Energy Consumption per Dollar GSP/GDP, 1990-2000



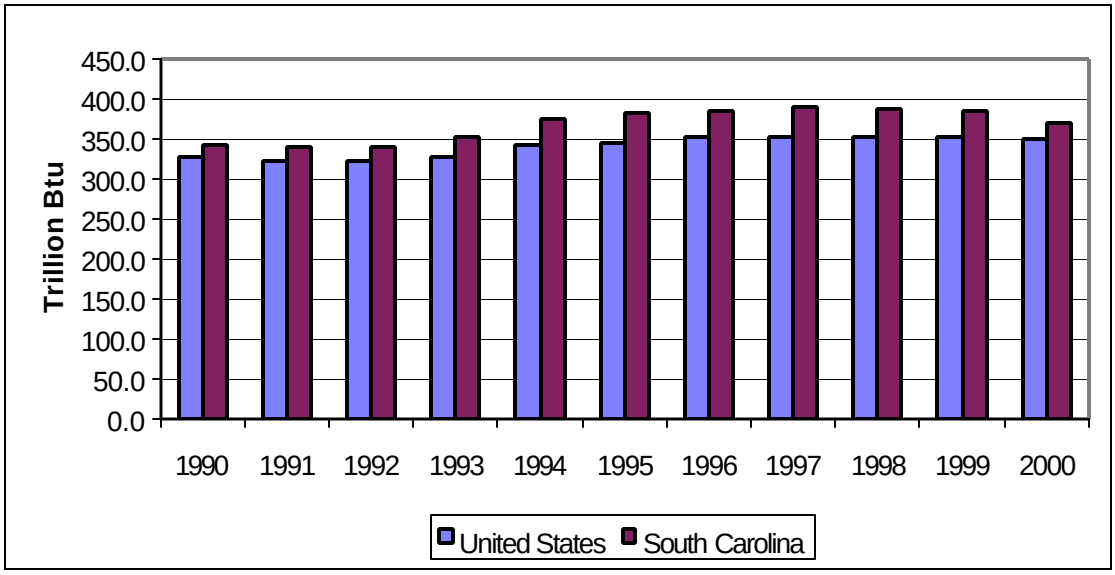
Sources: Energy Information Administration, *State Energy Data Report;* U.S. Department of Commerce, Bureau of Economic Analysis.

South Carolina Energy Consumption per Capita

Another measure of energy efficiency is per capita energy use. South Carolina ranks 21st in total energy consumption per capita, using more energy per person than 30 other states. However, South Carolina's energy consumption per capita is showing signs of leveling off after increasing more rapidly than the United States average during most of the 1990's. South Carolina saw a 7.6% increase in energy consumption per capita between 1990 and 2000, while the United States per capita rate rose an equivalent 7.0%. South Carolina's total energy use increased 15.5% between 1990 and 2000, while the population grew 14.9% over the same period.

Figure 1.16

South Carolina and U.S. Energy Consumption per Capita, 1990-2000



Source: Energy Information Administration, *State Energy Data Repor;* U.S. Census Bureau.

SECTION 2: ELECTRICITY

Electricity Generation in South Carolina

As South Carolina's economy has grown, so has its need for electricity. Electricity generation in South Carolina increased by 99.5% from 1980 to 2000, with power plants producing over 90 billion kilowatt hours of electricity in 2000. On a comparative level, nuclear energy accounted for 56.5% of electricity generation in South Carolina in 2000, while accounting for only 23.5% in the United States. As such, South Carolina ranks third in the nation in nuclear energy for electricity generation, behind only Pennsylvania and Illinois. Coal is the major fuel source for electricity generation in the United States, accounting for 56.3% in 2000 as compared with 42.5% in South Carolina. Geothermal, wood, wind, waste and solar energy sources accounted for 0.1% of electricity generation on the national level, but none in South Carolina.

Table 2.1

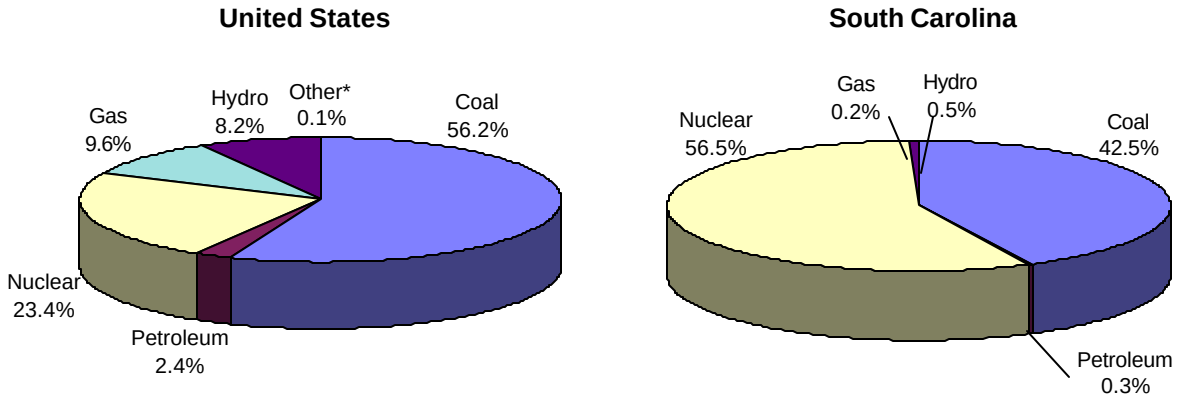
Net Generation from South Carolina Electric Utilities by Energy Source
1980 - 2000
(Million Kilowatthours)

Year	Coal	Petroleum	Nuclear	Gas	Hydro	TOTAL	Percent Change
1980	19,690	1,640	18,980	560	3,090	43,960	0.4%
1981	21,360	1,300	19,110	510	1,260	43,540	-1.0%
1982	21,250	290	14,570	50	2,490	38,650	-11.2%
1983	17,520	80	27,900	100	3,210	48,810	26.3%
1984	18,610	80	25,190	40	3,270	47,190	-3.3%
1985	19,820	1,100	34,410	50	1,870	57,250	21.3%
1986	19,502	66	35,625	130	1,216	56,539	-1.2%
1987	22,858	68	39,289	26	2,157	64,398	13.9%
1988	23,484	94	40,743	223	747	65,291	1.4%
1989	23,799	132	40,779	255	2,016	66,981	2.6%
1990	22,874	72	42,880	701	2,728	69,255	3.4%
1991	23,165	83	43,108	980	2,496	69,832	0.8%
1992	23,013	67	45,537	148	2,710	71,475	2.4%
1993	26,531	93	46,187	119	2,650	75,580	5.7%
1994	26,994	108	44,466	279	2,347	74,194	-1.8%
1995	25,802	131	49,174	601	2,734	78,442	5.7%
1996	30,305	126	43,572	91	2,233	76,327	-2.7%
1997	31,042	186	44,916	182	2,077	78,403	2.7%
1998	32,316	330	48,758	415	2,540	84,359	7.6%
1999	35,234	300	50,814	336	660	87,344	2.0%
2000	38,321	265	50,889	187	417	90,079	3.1%

Sources: Energy Information Administration, *State Energy Data Report* and *Electric Power Monthly*.

Figure 2.1

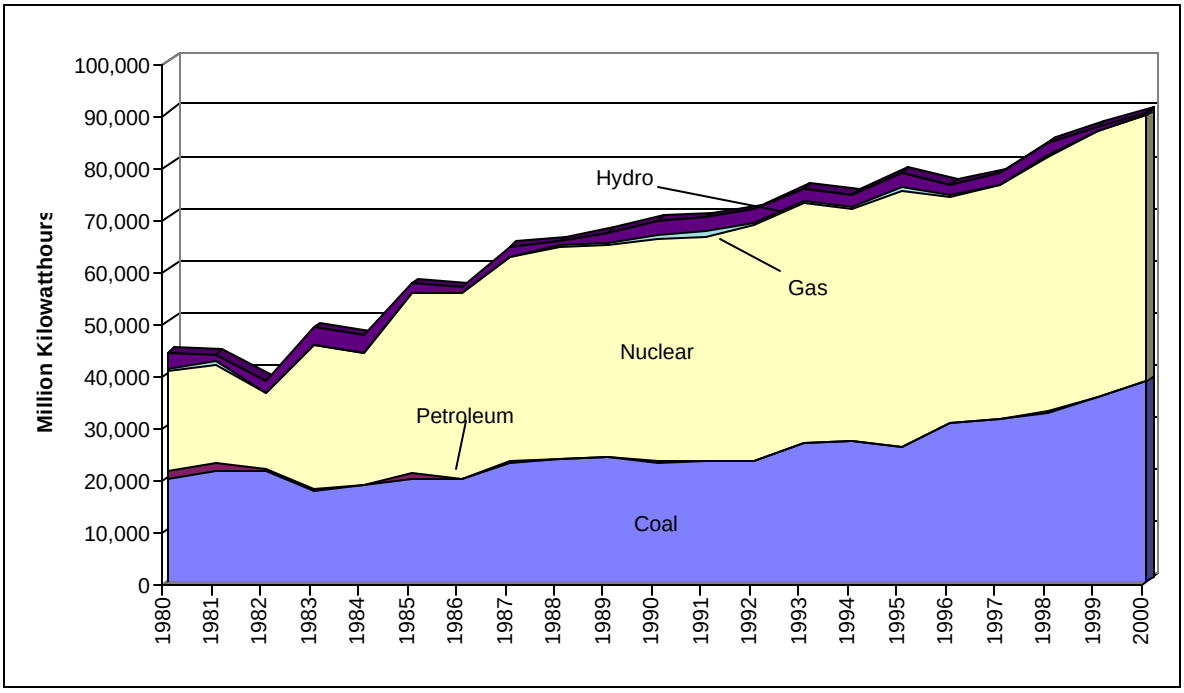
U.S. and South Carolina Electricity Generation by Fuel Source Comparison, 2000



*Includes geothermal, wood, wind, waste and solar sources of generation.
Sources: Energy Information Administration, *Electric Power Monthly* and *Electric Power Annual*.

Figure 2.2

South Carolina Electricity Generation by Fuel Source, 1980-2000



Sources: Energy Information Administration, *State Energy Data* Report and *Electric Power Monthly*.

Table 2.2

South Carolina Monthly Electric Utility Net Generation by Fuel Source, 1990-2000
(Million Kilowatthours)

1990

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	1,640	5	*	4,489	296	6,430
Feb	1,282	4	*	3,518	450	5,254
Mar	1,468	4	*	3,500	510	5,482
Apr	1,903	2	*	3,017	279	5,201
May	2,142	9	2	3,249	196	5,598
Jun	2,301	4	39	3,294	92	5,730
Jul	2,412	6	192	3,740	64	6,414
Aug	2,477	7	204	3,813	87	6,588
Sep	1,982	5	196	2,933	142	5,258
Oct	1,749	15	64	3,440	283	5,551
Nov	1,686	4	4	3,856	204	5,754
Dec	1,832	7	*	4,031	125	5,995
TOTAL	22,874	72	701	42,880	2,728	69,255
% TOTAL	33.0%	0.1%	1.0%	61.9%	3.9%	100.0%

1991

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,101	4	*	3,482	244	5,831
Feb	1,545	7	1	3,463	201	5,217
Mar	1,554	5	16	3,409	337	5,321
Apr	1,698	3	18	3,260	326	5,305
May	1,929	8	66	3,651	388	6,042
Jun	2,006	18	54	4,005	172	6,255
Jul	2,029	10	420	4,528	155	7,142
Aug	1,896	9	384	4,009	288	6,586
Sep	2,188	2	21	3,210	105	5,526
Oct	2,228	3	*	3,596	75	5,902
Nov	2,098	7	*	3,090	87	5,282
Dec	1,893	7	*	3,405	118	5,423
TOTAL	23,165	83	980	43,108	2,496	69,832
% TOTAL	33.2%	0.1%	1.4%	61.7%	3.6%	100.0%

1992

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	1,907	6	1	4,025	192	6,131
Feb	1,691	2	*	3,836	171	5,700
Mar	1,525	1	81	4,503	312	6,422
Apr	1,467	4	*	4,094	173	5,738
May	2,035	5	*	3,666	155	5,861
Jun	2,098	4	17	3,941	288	6,348
Jul	2,769	14	35	3,838	78	6,734
Aug	2,467	7	5	3,085	108	5,672
Sep	2,113	5	2	2,742	126	4,988
Oct	1,597	5	1	3,532	273	5,408
Nov	1,524	6	6	4,189	326	6,051
Dec	1,820	8	*	4,086	508	6,422
TOTAL	23,013	67	148	45,537	2,710	71,475
% TOTAL	32.2%	0.1%	0.2%	63.7%	3.8%	100.0%

1993

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	1,875	4	*	3,992	538	6,409
Feb	1,797	7	1	3,494	451	5,750
Mar	2,216	12	6	3,373	477	6,084
Apr	2,070	6	2	3,866	425	6,369
May	2,066	4	2	3,932	246	6,250
Jun	2,539	5	19	3,672	101	6,336
Jul	2,882	37	52	4,548	47	7,566
Aug	2,743	6	28	4,634	75	7,486
Sep	2,367	2	8	4,114	31	6,522
Oct	1,806	3	*	4,123	44	5,976
Nov	1,961	3	*	3,131	46	5,141
Dec	2,209	4	1	3,308	169	5,691
TOTAL	26,531	93	119	46,187	2,650	75,580
% TOTAL	35.1%	0.1%	0.2%	61.1%	3.5%	100.0%

1994

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,484	47	*	3,459	188	6,178
Feb	2,012	2	2	3,092	203	5,311
Mar	2,081	3	2	3,648	266	6,000
Apr	1,742	7	3	4,176	211	6,139
May	1,907	6	5	3,255	66	5,239
Jun	2,545	19	21	3,163	80	5,828
Jul	2,662	2	3	4,023	151	6,841
Aug	2,575	2	1	4,234	331	7,143
Sep	2,388	4	5	3,941	158	6,496
Oct	2,176	3	104	3,529	220	6,032
Nov	2,189	4	62	3,590	188	6,033
Dec	2,232	8	71	4,357	286	6,954
TOTAL	26,993	107	279	44,467	2,348	74,194
% TOTAL	36.4%	0.1%	0.4%	59.9%	3.2%	100.0%

1995

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,160	6	1	4,774	412	7,353
Feb	1,912	5	*	3,649	394	5,960
Mar	1,651	4	66	3,989	368	6,078
Apr	1,713	5	*	4,369	88	6,175
May	2,375	10	14	3,242	53	5,694
Jun	2,334	14	43	3,733	173	6,297
Jul	2,857	24	70	4,187	88	7,226
Aug	2,804	36	161	4,721	134	7,856
Sep	1,962	4	140	4,589	174	6,869
Oct	1,755	4	104	4,093	261	6,217
Nov	1,942	9	1	3,243	367	5,562
Dec	2,337	10	1	4,585	222	7,155
TOTAL	25,802	131	601	49,174	2,734	78,442
% TOTAL	32.9%	0.2%	0.8%	62.7%	3.5%	100.0%

1996

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,429	7	*	4,701	273	7,410
Feb	2,171	18	*	4,077	427	6,693
Mar	2,221	16	1	4,539	410	7,187
Apr	2,184	8	1	3,720	187	6,100
May	2,864	13	14	3,952	121	6,964
Jun	2,805	11	18	4,158	110	7,102
Jul	3,158	10	16	3,828	12	7,024
Aug	3,009	3	4	3,571	130	6,717
Sep	2,331	6	34	3,163	120	5,654
Oct	2,054	6	1	2,411	148	4,620
Nov	2,472	9	1	2,846	83	5,411
Dec	2,607	19	1	2,606	212	5,445
TOTAL	30,305	126	91	43,572	2,233	76,327
% TOTAL	39.7%	0.2%	0.1%	57.1%	2.9%	100.0%

1997

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,717	14	1	2,964	234	5,930
Feb	2,036	4	*	3,456	294	5,790
Mar	1,852	6	1	4,036	404	6,299
Apr	2,001	8	5	3,290	238	5,542
May	2,150	12	4	3,614	257	6,037
Jun	2,581	25	48	4,083	129	6,866
Jul	3,333	39	63	4,391	85	7,911
Aug	3,116	20	25	4,589	51	7,801
Sep	2,744	14	13	4,074	26	6,871
Oct	3,024	23	14	3,343	55	6,459
Nov	2,703	14	6	3,706	107	6,536
Dec	2,785	7	2	3,370	197	6,361
TOTAL	31,042	186	182	44,916	2,077	78,403
% TOTAL	39.6%	0.2%	0.2%	57.3%	2.6%	100.0%

1998

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,618	5	1	3,843	505	6,972
Feb	2,091	1	*	4,088	516	6,696
Mar	2,424	24	6	4,028	475	6,957
Apr	2,054	6	2	3,821	468	6,351
May	2,674	53	50	4,237	287	7,301
Jun	3,315	76	102	4,531	75	8,099
Jul	3,479	66	86	4,766	-6	8,391
Aug	3,496	46	88	3,679	28	7,337
Sep	3,105	25	67	3,635	39	6,871
Oct	2,401	5	5	3,628	19	6,058
Nov	2,145	12	6	4,037	39	6,239
Dec	2,514	11	2	4,465	95	7,087
TOTAL	32,316	330	415	48,758	2,540	84,359
% TOTAL	38.3%	0.4%	0.5%	57.8%	3.0%	100.0%

1999

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	2,668	34	1	4,813	195	7,711
Feb	2,317	4	1	4,353	174	6,849
Mar	2,680	13	2	4,840	111	7,646
Apr	3,108	15	7	3,834	18	6,982
May	3,050	19	6	2,693	-8	5,760
Jun	3,177	24	26	3,554	74	6,855
Jul	3,600	74	150	4,587	1	8,412
Aug	3,684	61	124	4,758	-34	8,593
Sep	2,885	12	12	4,487	15	7,411
Oct	2,642	15	*	4,438	11	7,106
Nov	2,562	10	4	4,143	43	6,762
Dec	2,861	19	3	4,314	60	7,257
TOTAL	35,234	300	336	50,814	660	87,344
% TOTAL	40.3%	0.3%	0.4%	58.2%	0.8%	100.0%

2000

Month	Coal	Oil	Gas	Nuclear	Hydro	TOTAL
Jan	3,182	26	2	4,707	94	8,011
Feb	2,875	9	1	4,273	105	7,263
Mar	2,857	7	2	4,228	99	7,193
Apr	2,453	5	4	4,007	82	6,551
May	3,212	21	38	4,343	19	7,633
Jun	3,412	26	49	4,470	-10	7,947
Jul	3,511	26	37	4,838	-20	8,392
Aug	3,572	24	42	4,819	-1	8,456
Sep	3,166	13	5	4,620	3	7,807
Oct	3,191	6	2	3,746	26	6,971
Nov	3,051	14	4	3,279	7	6,355
Dec	3,839	88	1	3,559	13	7,500
TOTAL	38,321	265	187	50,889	417	90,079
% TOTAL	42.5%	0.3%	0.2%	56.5%	0.5%	100.0%

*Denotes the value is less than 0.5.
Source: Energy Information Administration, *Electric Power Monthly*.

Number of Electric Consumers in South Carolina

The number of electric consumers in South Carolina increased by 25.1% from 1990 to 2000. Residential consumers increased by 24.1% during this period, with commercial consumers increasing by 33.7%, and industrial consumers increasing by 14.9%. In 2000, the residential sector accounted for 85.7% of all electric consumers, followed by the commercial sector with 13.3% of all consumers. In the residential sector, the average monthly kWh consumption in 2000 was 1,194 with an average monthly bill of $90.51. The average monthly kWh consumption in the commercial sector was 5,317 with the average monthly electric bill totaling $337.49. In the industrial sector, the average monthly kWh consumption was 546,706 with an average monthly electric bill of $20,452.60.

Table 2.3

Number of Ultimate Electric Consumers in South Carolina by Sector 1990-2000

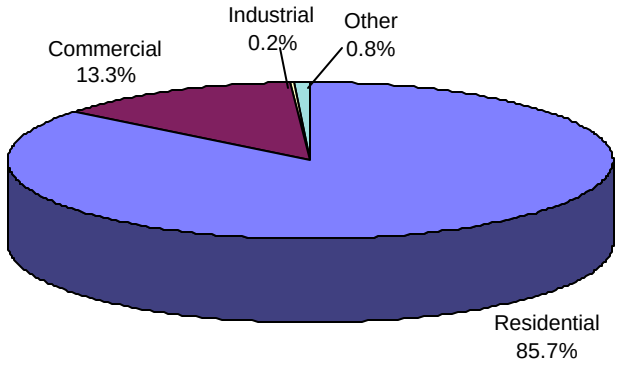
Year	Residential	Commercial	Industrial	Other*	Total	Percent Change
1990	1,421,991	204,997	4,418	14,901	1,646,307	2.3%
1991	1,449,397	209,639	4,254	16,601	1,679,891	2.0%
1992	1,476,086	213,229	4,221	18,683	1,712,219	1.9%
1993	1,505,304	217,696	4,379	11,974	1,739,353	1.6%
1994	1,536,458	222,395	4,342	12,437	1,775,632	2.1%
1995	1,567,196	228,523	4,498	12,490	1,812,707	2.1%
1996	1,608,129	239,495	4,681	14,841	1,867,146	3.0%
1997	1,641,416	248,801	6,091	13,790	1,910,098	2.3%
1998	1,683,858	262,630	4,751	18,428	1,969,667	3.1%
1999	1,724,911	266,724	4,900	15,550	2,012,085	2.2%
2000	1,764,298	274,003	5,077	16,118	2,059,496	2.4%

*Includes sales for public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Source: Energy Information Administration, *Electric Sales and Revenue*.

Figure 2.3

South Carolina Electric Customers by Sector, 2000



Source: Energy Information Administration, *Electric Sales and Revenue*.

South Carolina Electric Retail Sales to Consumers

South Carolina electric retail sales to ultimate consumers by sector increased by 116.5% from 1980 to 2000, and by 39.3% from 1990 to 2000 in terms of million kilowatthours. During the two-decade period 1980 to 2000, electric sales in the residential sector increased by 101.0%, sales in the commercial sector increased by 128.8%, and sales in the industrial sector increased by 107.2%. In 2000, the industrial sector comprised 42.9% of all electric sales in South Carolina, followed by the residential sector with 32.7%, and the commercial sector with 23.2%.

Table 2.4

South Carolina Annual Sales to Ultimate Consumers by Sector
1980 – 2000
(Million Kilowatthours)

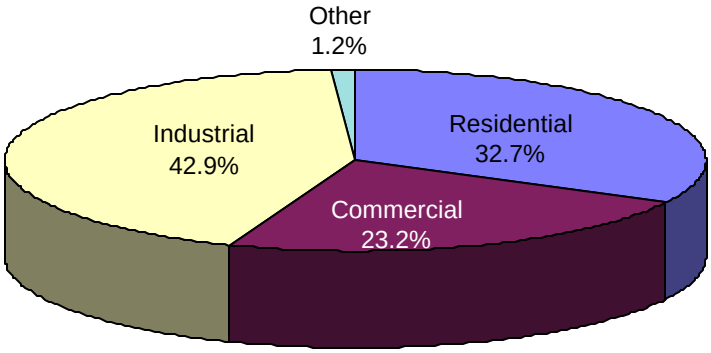
Year	Residential	Commercial	Industrial	Other*	TOTAL	Percent Change
1980	12,580	7,823	15,982	881	37,266	4.11%
1981	12,518	8,049	16,460	886	37,913	1.74%
1982	13,493	8,061	17,625	1,096	40,275	6.23%
1983	13,819	8,183	18,823	1,109	41,934	4.12%
1984	13,621	8,242	18,812	1,083	41,758	-0.42%
1985	13,654	8,715	19,000	1,138	42,507	1.79%
1986	16,155	9,786	22,734	694	49,369	16.14%
1987	18,643	10,340	24,225	699	53,907	9.19%
1988	16,963	10,656	24,098	735	52,452	-2.70%
1989	17,306	11,074	24,321	786	53,487	1.97%
1990	17,582	11,871	25,169	846	55,468	3.70%
1991	17,987	12,115	25,565	823	56,490	1.84%
1992	18,035	12,235	26,334	830	57,434	1.67%
1993	20,506	13,160	26,527	830	61,023	6.25%
1994	19,712	13,322	27,444	812	61,290	0.44%
1995	21,111	14,084	28,275	819	64,289	4.89%
1996	22,452	14,710	28,791	836	66,789	3.89%
1997	21,273	14,963	30,712	848	67,796	1.51%
1998	23,871	16,643	31,470	911	72,075	6.31%
1999	23,306	16,642	31,522	885	72,355	0.39%
2000	25,282	17,900	33,107	963	77,252	6.77%

* Includes sales for public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Source: Energy Information Administration, *Electric Sales and Revenue* and *Electric Power Monthly.*

Figure 2.4

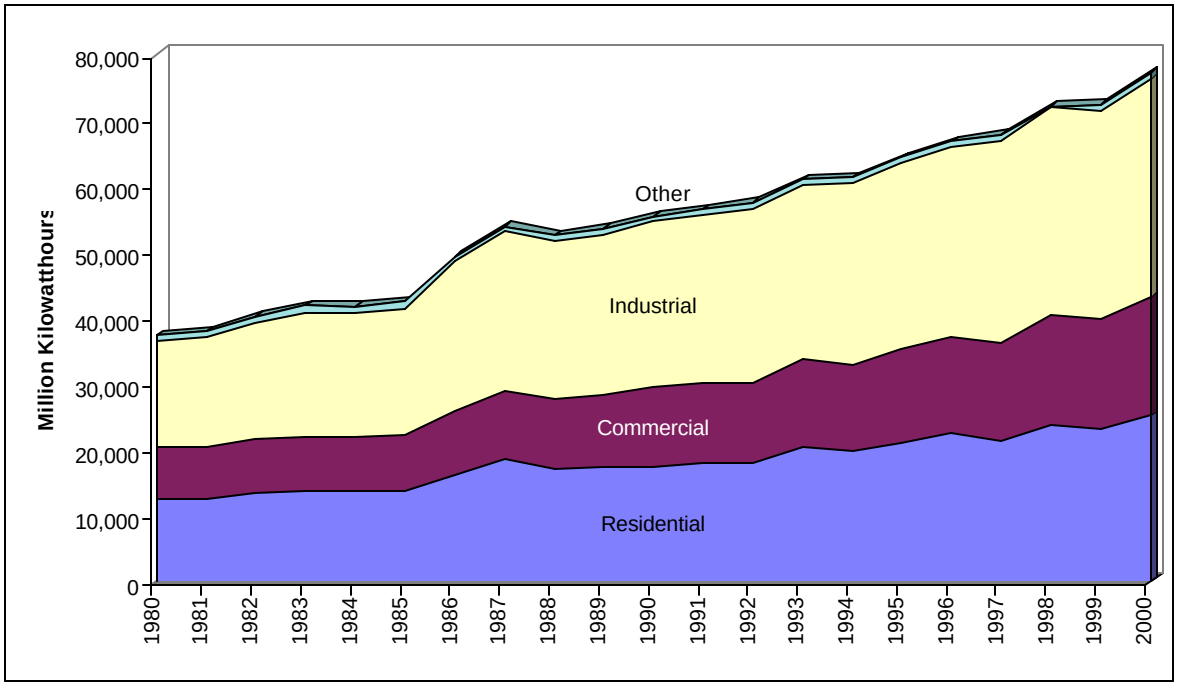
South Carolina Electric Retail Sales to Ultimate Consumers, 2000



Source: Energy Information Administration, *Electric Power Monthly*.

Figure 2.5

South Carolina Annual Electric Retail Sales to Ultimate Consumers, 1980-2000



Source: Energy Information Administration, *Electric Sales and Revenue* and *Electric Power Monthly*.

Table 2.5

South Carolina Monthly Sales of Electricity to Ultimate Customers, 1990-2000
(Million Kilowatthours)

1990

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	1,998	993	1,964	69	5,024
Feb	1,314	842	1,978	64	4,198
Mar	1,272	835	2,029	62	4,198
Apr	1,148	850	2,056	64	4,118
May	1,151	929	2,186	71	4,337
Jun	1,373	1,046	2,178	73	4,670
Jul	1,877	1,171	2,143	83	5,274
Aug	1,859	1,174	2,286	77	5,396
Sep	1,830	1,231	2,213	82	5,356
Oct	1,288	1,041	2,223	73	4,625
Nov	1,154	883	1,998	63	4,098
Dec	1,318	876	1,915	65	4,174
TOTAL	17,582	11,871	25,169	846	55,468
%TOTAL	31.7%	21.4%	45.4%	1.5%	100.0%

1991

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	1,660	920	1,920	64	4,564
Feb	1,563	910	1,907	65	4,445
Mar	1,416	883	1,915	61	4,275
Apr	1,148	892	2,095	66	4,201
May	1,150	933	2,247	68	4,398
Jun	1,535	1,119	2,183	73	4,910
Jul	1,906	1,203	2,201	79	5,389
Aug	1,957	1,223	2,307	77	5,564
Sep	1,679	1,169	2,270	76	5,194
Oct	1,256	1,014	2,279	66	4,615
Nov	1,236	919	2,149	66	4,370
Dec	1,481	930	2,092	62	4,565
TOTAL	17,987	12,115	25,565	823	56,490
%TOTAL	31.8%	21.4%	45.3%	1.5%	100.0%

1992

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	1,714	956	1,956	67	4,693
Feb	1,629	942	2,000	65	4,636
Mar	1,334	924	2,192	63	4,513
Apr	1,310	879	2,028	64	4,281
May	1,148	927	2,213	62	4,350
Jun	1,298	1,029	2,370	69	4,766
Jul	1,865	1,211	2,319	83	5,478
Aug	1,992	1,253	2,380	77	5,702
Sep	1,581	1,165	2,348	78	5,172
Oct	1,252	1,021	2,235	67	4,575
Nov	1,183	925	2,168	65	4,341
Dec	1,729	1,003	2,125	70	4,927
TOTAL	18,035	12,235	26,334	830	57,434
%TOTAL	31.4%	21.3%	45.9%	1.4%	100.0%

1993

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	1,817	1,001	1,986	63	4,867
Feb	1,688	956	2,017	63	4,724
Mar	1,760	990	2,081	67	4,898
Apr	1,380	929	2,147	63	4,519
May	1,194	1,021	2,233	65	4,513
Jun	1,649	1,185	2,416	77	5,327
Jul	2,329	1,320	2,240	80	5,969
Aug	2,295	1,365	2,418	77	6,155
Sep	2,001	1,300	2,363	79	5,743
Oct	1,371	1,112	2,256	68	4,807
Nov	1,316	955	2,230	62	4,563
Dec	1,706	1,026	2,140	66	4,938
TOTAL	20,506	13,160	26,527	830	61,023
%TOTAL	33.6%	21.6%	43.5%	1.4%	100.0%

1994

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,279	1,083	1,932	68	5,362
Feb	1,921	1,048	2,173	66	5,208
Mar	1,464	977	2,184	62	4,687
Apr	1,227	977	2,213	63	4,480
May	1,211	1,053	2,362	66	4,692
Jun	1,618	1,200	2,401	71	5,290
Jul	2,158	1,326	2,218	78	5,780
Aug	2,056	1,336	2,634	77	6,103
Sep	1,759	1,277	2,400	72	5,508
Oct	1,260	1,068	2,406	64	4,798
Nov	1,194	960	2,326	61	4,541
Dec	1,565	1,017	2,195	64	4,841
TOTAL	19,712	13,322	27,444	812	61,290
%TOTAL	32.2%	21.7%	44.8%	1.3%	100.0%

1995

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,000	1,079	2,184	65	5,328
Feb	1,974	1,072	2,159	66	5,271
Mar	1,611	1,023	2,278	60	4,972
Apr	1,256	1,029	2,323	65	4,673
May	1,324	1,120	2,486	68	4,998
Jun	1,753	1,275	2,438	71	5,537
Jul	2,160	1,375	2,403	77	6,015
Aug	2,394	1,444	2,557	78	6,473
Sep	1,962	1,366	2,422	74	5,824
Oct	1,370	1,173	2,475	69	5,087
Nov	1,427	1,055	2,335	63	4,880
Dec	1,880	1,073	2,215	63	5,231
TOTAL	21,111	14,084	28,275	819	64,289
%TOTAL	32.8%	21.9%	44.0%	1.3%	100.0%

1996

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,494	1,202	2,160	71	5,927
Feb	2,206	1,244	2,246	66	5,762
Mar	1,688	1,087	2,305	64	5,144
Apr	1,524	1,059	2,315	63	4,961
May	1,415	1,171	2,447	67	5,100
Jun	1,874	1,334	2,434	74	5,716
Jul	2,341	1,414	2,495	82	6,332
Aug	2,283	1,492	2,588	68	6,431
Sep	1,926	1,365	2,525	80	5,896
Oct	1,362	1,198	2,548	71	5,179
Nov	1,407	1,045	2,391	65	4,908
Dec	1,932	1,099	2,337	65	5,433
TOTAL	22,452	14,710	28,791	836	66,789
%TOTAL	33.6%	22.0%	43.1%	1.3%	100.0%

1997

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,157	1,211	2,356	70	5,794
Feb	1,950	1,143	2,368	67	5,528
Mar	1,420	1,041	2,394	63	4,918
Apr	1,314	1,092	2,523	67	4,996
May	1,292	1,131	2,610	65	5,098
Jun	1,518	1,271	2,685	70	5,544
Jul	2,304	1,494	2,649	82	6,529
Aug	2,298	1,521	2,777	81	6,677
Sep	2,070	1,474	2,692	79	6,315
Oct	1,482	1,292	2,616	74	5,464
Nov	1,472	1,089	2,588	64	5,213
Dec	1,996	1,204	2,454	66	5,720
TOTAL	21,273	14,963	30,712	848	67,796
%TOTAL	31.4%	22.1%	45.3%	1.3%	100.0%

1998

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,244	1,260	2,399	72	5,975
Feb	2,003	1,187	2,428	70	5,688
Mar	1,729	1,156	2,615	68	5,568
Apr	1,494	1,182	2,537	67	5,280
May	1,363	1,221	2,656	70	5,310
Jun	2,436	1,688	2,918	80	7,122
Jul	2,866	1,891	2,532	91	7,380
Aug	2,686	1,614	2,940	90	7,330
Sep	2,362	1,629	2,729	90	6,810
Oct	1,682	1,413	2,643	77	5,815
Nov	1,386	1,197	2,543	67	5,193
Dec	1,620	1,205	2,530	69	5,424
TOTAL	23,871	16,643	31,470	911	72,895
%TOTAL	32.7%	22.8%	43.2%	1.2%	100.0%

1999

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,450	1,346	2,296	69	6,161
Feb	1,651	1,133	2,409	64	5,257
Mar	1,884	1,206	2,524	64	5,678
Apr	1,556	1,256	2,541	70	5,423
May	1,495	1,310	2,678	70	5,553
Jun	1,881	1,473	2,769	76	6,199
Jul	2,355	1,615	2,706	82	6,758
Aug	2,909	1,793	2,981	89	7,772
Sep	2,325	1,634	2,697	86	6,742
Oct	1,485	1,369	2,689	76	5,619
Nov	1,454	1,232	2,641	67	5,394
Dec	1,861	1,275	2,591	72	5,799
TOTAL	23,306	16,642	31,522	885	72,355
%TOTAL	32.2%	23.0%	43.6%	1.2%	100.0%

2000

Month	Residential	Commercial	Industrial	Other	TOTAL
Jan	2,364	1,351	2,715	75	6,505
Feb	2,483	1,352	2,438	75	6,348
Mar	1,945	1,480	2,852	87	6,364
Apr	1,414	1,260	2,695	73	5,442
May	1,640	1,417	2,895	76	6,028
Jun	2,388	1,741	2,841	89	7,059
Jul	2,742	1,717	2,845	91	7,395
Aug	2,566	1,762	2,994	87	7,409
Sep	2,201	1,640	2,866	87	6,794
Oct	1,604	1,444	2,768	80	5,896
Nov	1,506	1,310	2,622	70	5,508
Dec	2,429	1,426	2,576	73	6,504
TOTAL	25,282	17,900	33,107	963	77,252
%TOTAL	32.7%	23.2%	42.9%	1.2%	100.0%

Source: Energy Information Administration, *Electric Power Monthly*.

South Carolina Residential Statistics

The number of South Carolina residential electric customers served by investor-owned utilities increased by 74.9% (or 512,417) new customers) from 1980 to 2000. Sales to residential customers increased by 64.7% and revenues increased by $666.0 million during the same period. The average annual electric bill for South Carolina residential electric customers increased by 85.0% or $487.90 from 1980 to 2000, as compared with an increase of 88.9% or $406.50 on the national level. The average electric rate for South Carolina residential customers increased by 63.6% or $2.86 during the same period, with the U.S. average increasing by 59.1% or $3.17. From 1980 to 2000 the kWh per customer increased by 13.1% in South Carolina compared with 18.6% on the national level. The average annual electric bill for South Carolina residential electric customers from all utilities (municipal, cooperatives, investor-owned) in 2000 is $1069.10

Table 2.6

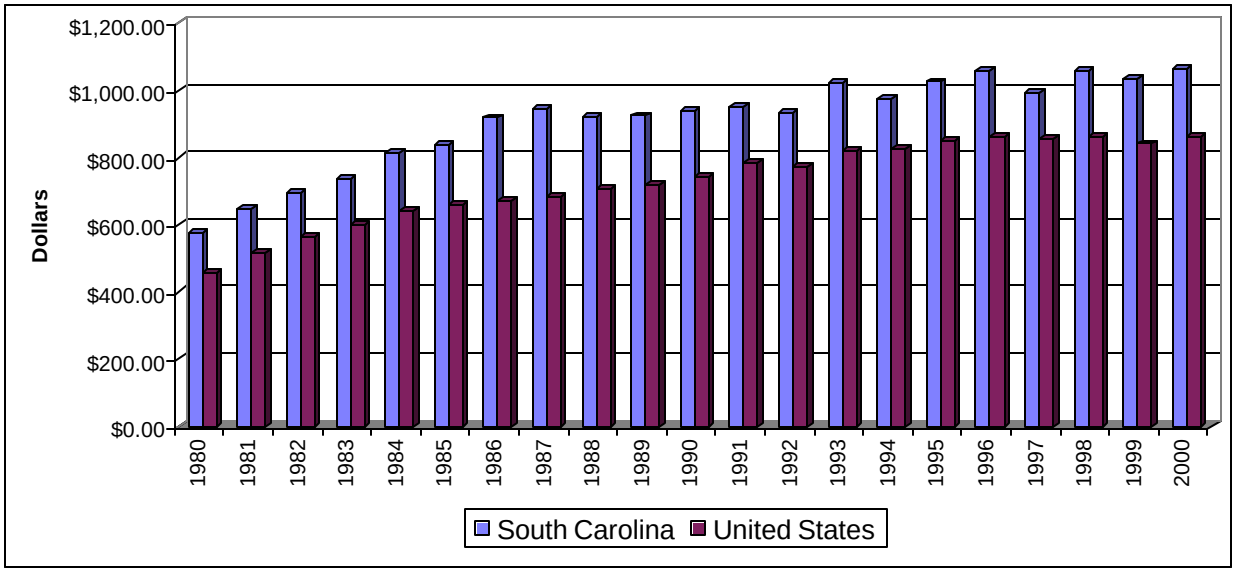
Selected South Carolina and U.S. Residential Statistics for Investor-Owned Electric Utilities, 1980-2000

Year	Number of Customers	Sales (Million kWh)	Revenue (Million dollars)	kWh per Customer		Average Rate (Cents per kWh)		Average Annual Electric Bill	
	S.C.	S.C.	S.C.	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.
1980	684,338	8,739	392.9	12,770	8,539	4.50	5.36	$574.13	$457.29
1981	698,900	8,698	450.6	12,445	8,311	5.18	6.19	$644.73	$514.38
1982	708,908	8,520	492.1	12,019	8,261	5.77	6.81	$694.17	$562.54
1983	721,695	8,845	530.5	12,256	8,379	6.00	7.15	$735.08	$599.44
1984	739,330	9,065	601.3	12,262	8,500	6.63	7.53	$813.30	$640.47
1985	758,676	9,082	633.8	11,971	8,487	6.98	7.79	$835.47	$661.10
1986	778,637	9,957	714.7	12,788	8,627	7.18	7.78	$917.89	$671.60
1987	794,815	10,366	751.6	13,042	8,816	7.25	7.75	$945.65	$683.65
1988	811,084	10,435	749.1	12,866	9,082	7.18	7.78	$923.59	$706.82
1989	827,587	10,577	764.3	12,796	9,063	7.23	7.95	$924.68	$720.24
1990	841,142	11,008	791.6	13,086	9,056	7.19	8.17	$941.09	$740.04
1991	855,733	11,246	812.9	13,142	9,280	7.23	8.46	$949.95	$784.80
1992	868,870	11,309	810.2	13,016	8,949	7.16	8.63	$932.53	$772.58
1993	881,858	12,304	901.0	13,953	9,394	7.32	8.73	$1,021.67	$820.39
1994	896,164	11,638	872.1	12,985	9,378	7.49	8.83	$973.17	$828.17
1995	910,392	12,558	933.4	13,794	9,583	7.43	8.87	$1,025.30	$849.94
1996	927,803	13,033	982.7	14,047	9,713	7.54	8.86	$1,059.12	$860.85
1997	945,107	12,448	934.7	13,171	9,591	7.53	8.94	$991.81	$857.27
1998	963,820	13,494	1,019.6	14,406	9,915	7.55	8.71	$1,058.72	$863.95
1999	982,055	13,540	1,014.0	13788	9,897	7.49	8.50	$1,032.57	$841.71
2000	1,196,755	14,397	1,058.9	14,439	10,123	7.36	8.53	$1,062.03	$863.79

Source: Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry.*

Figure 2.6

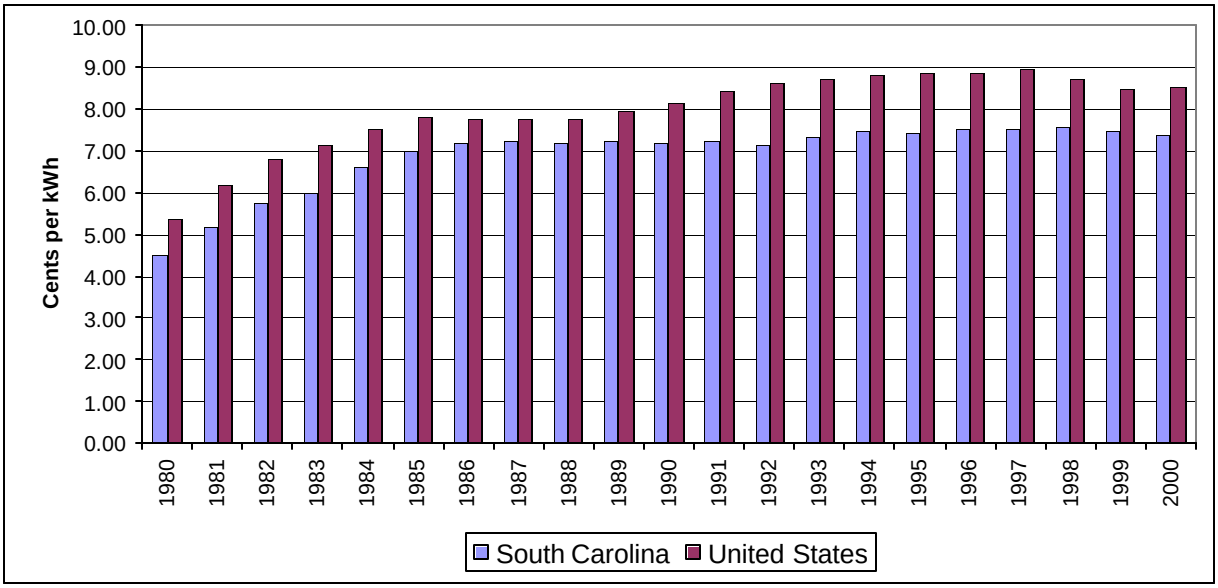
South Carolina and U.S. Annual Average Residential Electric Bill, 1980-2000



Sources: South Carolina Public Service Commission; Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry.*

Figure 2.7

South Carolina and U.S. Annual Average Residential Electric Rate, 1980-2000



Sources: Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry.*

Table 2.7

Class of Ownership, Number of Ultimate Consumers, and Average Rate per kWh By Sector of South Carolina Electric Utilities, 2000

Electric Utility	Class of Ownership	Total Number of Consumers	Average Rate (Cents/kWh)		
			Residential	Commercial	Industrial
Abbeville Water and Electric	Publicly Owned	4,245	9.18	8.17	N/A
Aiken Electric Co-op	Cooperative	37,666	8.06	6.73	4.08
Bamberg, City of	Publicly Owned	1,788	6.35	6.77	5.50
Bennettsville Municipal	Publicly Owned	4,912	7.67	7.56	N/A
Berkeley Electric Co-op	Cooperative	62,787	7.66	7.82	5.38
Black River Electric Co-op	Cooperative	26,394	7.03	8.09	4.94
Blue Ridge Electric Co-op	Cooperative	54,576	9.25	7.87	5.51
Broad River Electric Co-op	Cooperative	17,290	8.80	7.94	6.66
Camden Municipal Utility	Publicly Owned	8,847	7.30	7.63	N/A
Carolina Power & Light*	Investor-Owned	164,392	7.85	6.87	4.66
Clinton Combined Utility System	Publicly Owned	4,513	9.77	8.49	6.20
Coastal Electric Co-op	Cooperative	10,275	9.07	7.67	N/A
Due West, City of	Publicly Owned	345	10.60	N/A	N/A
Duke Power Company**	Investor-Owned	484,030	6.84	5.85	3.61
Easley Combined Utility System	Publicly Owned	16,546	8.81	7.25	N/A
Edisto Electric Co-op	Cooperative	18,252	8.27	8.89	5.63
Fairfield Electric Co-op	Cooperative	19,909	7.37	7.09	3.91
Gaffney, City of	Publicly Owned	8,692	8.28	9.29	3.30
Georgetown, City of	Publicly Owned	4,876	7.48	7.45	N/A
Greenwood Comm. of Public Works	Publicly Owned	12,854	6.02	6.31	4.67
Greer Commission of Public Works	Publicly Owned	10,977	8.62	6.96	N/A
Haywood Electric Member Corp.***	Cooperative	14	N/A	N/A	N/A
Horry Electric Co-op	Cooperative	42,154	7.64	7.54	6.41
Laurens, City of	Publicly Owned	5,273	8.19	7.29	N/A
Laurens Electric Co-op	Cooperative	42,505	8.32	8.77	5.30
Little River Electric Co-op	Cooperative	12,587	8.56	8.25	N/A
Lockhart Power Company	Investor-Owned	6,202	7.32	7.77	4.13
Lynches River Electric Co-op	Cooperative	19,014	7.62	7.37	4.88
Marlboro Electric Co-op	Cooperative	6,405	8.67	8.64	2.95
McCormick, Town of	Publicly Owned	1,096	9.71	9.36	N/A
Mid-Carolina Electric Co-op	Cooperative	41,047	7.74	7.16	4.70
Newberry, City of	Publicly Owned	4,789	8.87	8.28	6.29
Newberry Electric Co-op	Cooperative	11,254	6.79	6.87	5.23
Orangeburg, City of	Publicly Owned	23,126	5.12	5.22	3.89
Palmetto Electric Co-op	Cooperative	49,409	6.69	6.60	5.34
Pee Dee Electric Co-op	Cooperative	27,802	7.77	7.49	3.61
Prosperity, Town of	Publicly Owned	632	7.43	6.22	N/A
Rock Hill, City of	Publicly Owned	26,530	8.55	7.82	5.83
Santee Electric Co-op	Cooperative	41,059	7.50	8.05	3.97
Seneca, City of	Publicly Owned	5,691	6.92	8.12	4.53
South Carolina Electric & Gas Co.	Investor-Owned	530,696	7.97	6.24	3.89
Santee Cooper	Publicly Owned	128,548	6.66	5.77	3.16
Tri-County Electric Co-op	Cooperative	16,693	8.23	7.02	N/A
Union, City of	Publicly Owned	7,641	9.13	8.36	7.55
Westminister, City of	Publicly Owned	1,700	9.81	8.13	N/A
Winnsboro, Town of	Publicly Owned	4,250	8.00	4.20	N/A
York Electric Co-op	Cooperative	29,213	8.77	7.35	5.96
Total	**47**	**2,059,496**	**7.58**	**6.35**	**3.74**

*A subsidiary of Progress Energy. **A subsidiary of Duke Energy Corporation. ***A North Carolina-based electric cooperative.

Source: Energy Information Administration, *Electric Sales and Revenue*.

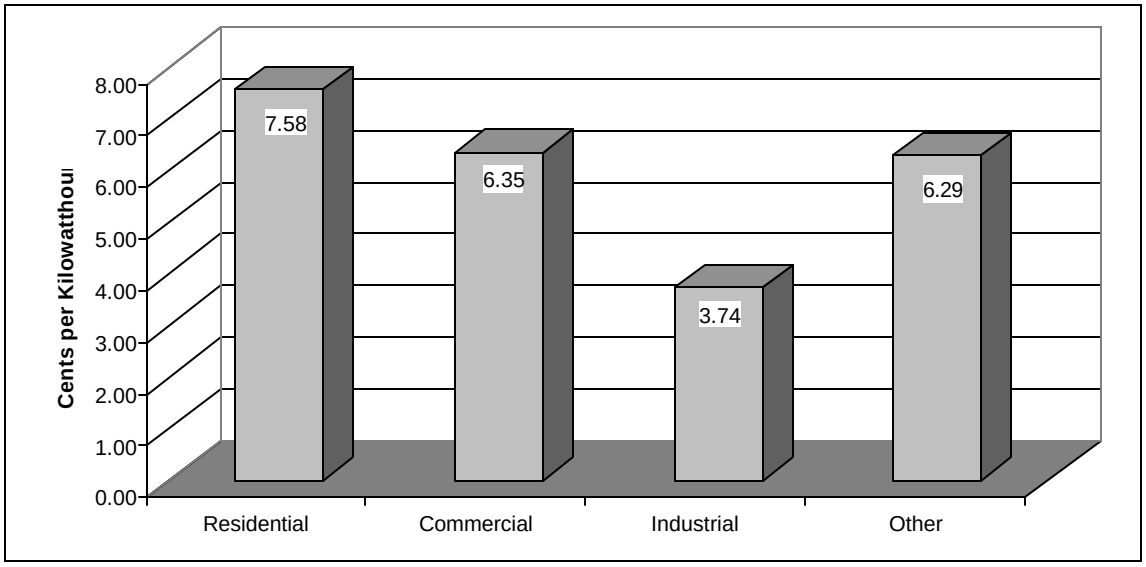
Table 2.8

Number of, Sales to, Revenue from Sales, and Average Revenue per Kilowatthour to Ultimate Electric Consumers in South Carolina by Sector, 2000				
Sector	**Number of Consumers**	**Sales (Million kWh)**	**Revenue from Sales (Thousand Dollars)**	**Average Revenue per kWh (Cents)**
Residential	1,764,298	$25,270	$1,916,222	7.58
Commercial	274,003	$17,483	$1,109,685	6.35
Industrial	5,077	$33,308	$1,246,054	3.74
Other	16,118	$951	$59,804	6.29
TOTAL	**2,059,496**	**$77,012**	**$4,331,765**	**5.62**

Source: Energy Information Administration, *Electric Sales and Revenue*.

Figure 2.8

South Carolina Electric Utility Average Rate per kWh by Sector, 2000



Source: Energy Information Administration, *Electric Sales and Revenue*.

Table 2.9

South Carolina Electricity Sales by Utility, Class of Ownership and Sector, 2000
(Thousand kWh)

Electric Utility	Class of Ownership	Residential	Commercial	Industrial	Other[1]	TOTAL
Abbeville Water and Electric	Publicly Owned	32,913	23,211	0	5,898	62,022
Aiken Electric Co-op	Cooperative	517,009	95,067	139,831	350	752,257
Bamberg, City of	Publicly Owned	18,812	18,330	8,296	0	45,438
Bennettsville Municipal	Publicly Owned	54,340	39,427	0	0	93,767
Berkeley Electric Co-op	Cooperative	980,153	116,926	134,595	50,000	1,281,674
Black River Electric Co-op	Cooperative	391,953	59,689	125,246	18,413	595,301
Blue Ridge Electric Co-op	Cooperative	620,561	124,951	40,553	5,511	791,576
Broad River Electric Co-op	Cooperative	218,960	26,500	15,290	0	260,750
Camden, City of	Publicly Owned	97,967	66,876	0	0	164,843
Carolina Power & Light*	Investor-Owned	2,041,790	1,665,067	3,453,809	92,423	7,253,089
Clinton Combined Utility System	Publicly Owned	35,662	42,072	36,857	867	115,458
Coastal Electric Co-op	Cooperative	131,997	22,313	0	0	154,310
Due West, City of	Publicly Owned	3,755	650	94	7,617	12,116
Duke Power Company**	Investor-Owned	5,632,775	4,899,486	12,068,211	59,347	22,659,819
Easley Combined Utility System	Publicly Owned	132,300	117,242	0	3,127	252,669
Edisto Electric Co-op	Cooperative	217,416	35,867	24,309	732	278,324
Fairfield Electric Co-op	Cooperative	284,911	55,106	184,091	0	524,108
Gaffney, City of	Publicly Owned	67,483	85,430	62,017	4,500	219,430
Georgetown, City of	Publicly Owned	51,104	101,152	0	0	152,256
Greenwood Comm. of Public Works	Publicly Owned	106,053	34,848	126,496	3,689	271,086
Greer Commission of Public Works	Publicly Owned	111,549	103,416	0	1,628	216,593
Haywood Electric Member Corp.**	Cooperative	31	52	0	0	83
Horry Electric Co-op	Cooperative	561,813	112,474	21,875	0	696,162
Laurens, City of	Publicly Owned	46,762	47,443	0	3,532	97,737
Laurens Electric Co-op	Cooperative	524,984	107,222	118,626	3,544	754,376
Little River Electric Co-op	Cooperative	140,013	29,317	0	2,917	172,247
Lockhart Power Company	Investor-Owned	67,312	21,310	132,262	306	221,190
Lynches River Electric Co-op	Cooperative	228,445	35,128	61,484	190	325,247
Marlboro Electric Co-op	Cooperative	83,193	16,991	518,723	0	618,907
McCormick, Town of	Publicly Owned	10,190	8,436	6	0	18,632
Mid-Carolina Electric Co-op	Cooperative	581,667	182,162	22,087	352	786,268
Newberry, City of	Publicly Owned	43,288	57,287	59,319	0	159,894
Newberry Electric Co-op	Cooperative	147,875	9,727	80,741	0	283,343
Orangeburg, City of	Publicly Owned	292,181	165,146	405,233	2	862,562
Palmetto Electric Co-op	Cooperative	708,053	214,671	242,125	14,232	1,179,081
Pee Dee Electric Co-op	Cooperative	420,595	55,169	361,499	4,381	841,644
Prosperity, Town of	Publicly Owned	6,299	4,006	0	0	10,305
Rock Hill, City of	Publicly Owned	247,377	328,247	52,688	0	628,312
Santee Electric Co-op	Cooperative	619,005	77,870	517,006	0	1,213,881
Seneca, City of	Publicly Owned	54,133	58,489	40,261	1,279	154,162
South Carolina Electric & Gas Co.	Investor-Owned	6,664,735	6,305,651	6,665,217	552,654	20,188,257
Santee Cooper	Publicly Owned	1,346,737	1,650,614	7,554,197	67,996	10,619,544
Tri-County Electric Co-op	Cooperative	231,567	41,968	0	0	276,915
Union, City of	Publicly Owned	64,911	47,421	8,090	12,498	132,920
Westminister, City of	Publicly Owned	14,197	16,000	0	0	30,197
Winnsboro, Town of	Publicly Owned	35,000	52,320	0	4,500	91,820
York Electric Co-op	Cooperative	380,290	104,606	26,378	25,123	536,397
TOTAL	**47**	**25,270,116**	**17,483,353**	**33,307,512**	**947,608**	**77,011,969**

*A subsidiary of Progress Energy. **A subsidiary of Duke Energy Corporation. ***A North Carolina-based electric cooperative.
[1]Includes sales for public street and highway ighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.
Source: Energy Information Administration, *Electric Sales and Revenue*.

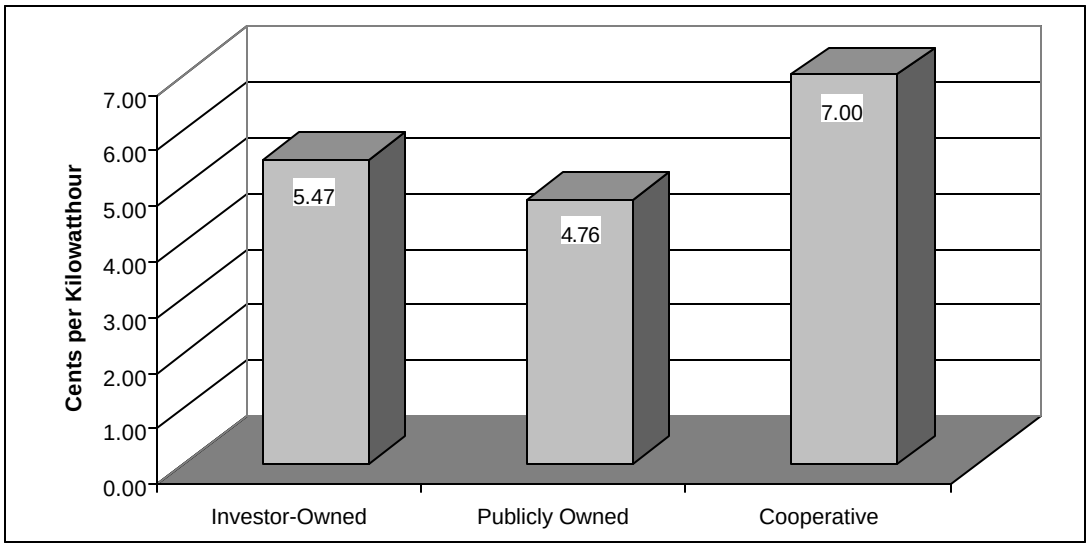
Table 2.10

Number of, Sales to, Revenue from Sales, and Average Revenue per Kilowatthour to Ultimate Consumers in South Carolina by Class of Ownership, 2000				
Class	**Number of Consumers**	**Sales (Million kWh)**	**Revenue from Sales (Thousand Dollars)**	**Average Revenue per kWh (Cents)**
Investor-Owned	1,185,320	50,322	2,779,379	5.52
Publicly Owned	287,871	14,412	688,274	4.78
Cooperative	586,305	12,278	864,112	7.04
TOTAL	**2,059,496**	**77,012**	**4,331,765**	**5.62**

Source: Energy Information Administration, *Electric Sales and Revenue*.

Figure 2.9

South Carolina Average Electric Rate per kWh by Class of Ownership, 2000



Source: Energy Information Administration, *Electric Sales and Revenue*.

South Carolina Electric Utility Emissions Data

A variety of gases and particulates are formed when fossil fuels are burned in the production of electricity. Among the gases emitted during such burning are sulfur dioxide (SO_2), nitrogen oxides (NO_X), and carbon dioxide (CO_2). If these gases are not captured by some type of pollution control equipment, they are released into the atmosphere. Estimated emissions from all fossil-fueled steam-electric generating units at South Carolina electric utilities increased by 34.0% from 1993 to 1999, and by 8.7% from 1998 to 1999. In 1999, carbon dioxide from coal-fired plants accounted for 97.0% of emissions from fossil-fueled generating units in South Carolina. Consequently, the pollution control equipment used most often at the generation units in the electric utility plants in South Carolina is particulate collection, which is mainly centered on coal combustion because of the large percentage of ash that coal contains. This particulate matter from coal is most frequently removed from the combustion gases by either filtering in a baghouse, or in an electrostatic precipitator. In this case the particulates are given an electric charge and collected.

Table 2.11

Estimated Emissions from Fossil-Fueled Steam-Electric Generating Units at All South Carolina Electric Utilities, 1993-1999
(Thousand Short Tons)

Year	Sulfur Dioxide	Nitrogen Oxides	Carbon Dioxide	Total Emissions	Percent Change
1993	178	87	26,850	27,115	N/A
1994	190	88	27,501	27,779	2.4%
1995	204	82	26,518	26,804	-3.5%
1996	228	95	30,636	30,959	15.5%
1997	227	93	31,251	31,571	2.0%
1998	250	90	33,079	33,419	5.9%
1999	248	94	35,894	36,326	8.7%

Source: Energy Information Administration, *Electric Power Annual, Volume II*.

Nuclear Power Plants in South Carolina

Table 2.12

Catawba

The Catawba Nuclear Station is a single unit located in North-Central South Carolina, 6 miles north of Rock Hill and 19 miles southwest of Charlotte. It is sited on a 391 acre peninsula bounded by Beaver Dam Creek, Big Allison Creek and Lake Wylie.

Unit 1

Operator:	Duke Power Company (subsidiary of Duke Energy)
Owners:	North Carolina Electric Membership Corp. (56.3%), Duke Power (25%), Saluda River Electric Cooperative (18.8%)
Reactor Supplier:	Westinghouse Corporation
Capacity:	1129 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	January 1985
License Expiration date:	12/06/2024
Electricity Produced in 2000:	8.92 billion kWh
2000 Average Capacity Factor:	89.98%

Unit 2

Operator:	Duke Power Company (subsidiary of Duke Energy)
Owners:	North Carolina Eastern Municipal Power Agency (75%), Piedmont Municipal Power Agency (25%)
Reactor Supplier:	Westinghouse Corporation
Capacity:	1129 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	May 1986
License Expiration date:	02/24/2026
Electricity Produced in 2000:	8.98 billion kWh
2000 Average Capacity Factor:	90.56%

H.B. Robinson

The H.B. Robinson Plant is sited on over 5000 acres near Hartsville, and 56 miles east of Columbia, South Carolina. The site includes Lake Robinson, its source of cooling water and a coal-fired unit, H.B. Robinson 1. The site is licensed for dry storage of spent fuel and had 8 loaded casks in 2000.

Operator:	Carolina Power & Light Co. (subsidiary of Progress Energy)
Owner:	Progress Energy (100.0%)

Reactor Supplier:	Westinghouse Corporation
Capacity:	683 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	September 1970
License Expiration date:	07/31/2010
Electricity Produced in 2000:	6.24 billion kWh
2000 Average Capacity Factor:	103.96%

Oconee

The Oconee Nuclear Station is located on the shore of Lake Keowee, approximately 26 miles west of Greenville, South Carolina. It is licensed for dry storage of spent nuclear fuel and had 49 casks by March of 2000.

Unit 1

Operator:	Duke Power Co.
Owner:	Duke Energy Corp. (100.0%)
Reactor Supplier:	Babcock and Wilcox
Capacity:	846 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	February 1973
License Expiration date:	02/06/2013
Electricity Produced in 2000:	6.31 billion kWh
2000 Average Capacity Factor:	84.90%

Unit 2

Operator:	Duke Power Co.
Owner:	Duke Energy Corp. (100.0%)
Reactor Supplier:	Babcock and Wilcox
Capacity:	846 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	October 1973
License Expiration date:	10/06/2013
Electricity Produced in 2000:	7.50 billion kWh
2000 Average Capacity Factor:	100.92%

Unit 3

Operator:	Duke Power Co.
Owner:	Duke Energy Corp. (100.0%)
Reactor Supplier:	Babcock and Wilcox
Capacity:	846 net MWe
Reactor Type:	Pressurized water reactor
Date of Operation:	July 1974
License Expiration date:	07/19/2014
Electricity Produced in 2000:	6.58 billion kWh
2000 Average Capacity Factor:	88.52%

Virgil C. Summer

The Virgil C. Summer nuclear station occupies a site in Fairfield County near Jenkinsville, South Carolina, about 26 miles southwest of Columbia. The site includes the decommissioned experimental CVTR unit. Water from the Monticello reservoir provides cooling water and feeds a pumped storage unit.

Operator:	South Carolina Electric & Gas Co.
Owners:	South Carolina Electric & Gas Co. (66.7%), South Carolina Public Service Authority (33.3%)
Reactor Supplier:	Westinghouse Corporation
Capacity:	952 net MWe
Reactor Type:	Pressurized water reactor

Date of Operation:	November 1982
License Expiration date:	08/06/2022
Electricity Produced in 2000:	6.36 billion kWh
2000 Average Capacity Factor:	76.05%

Inventory of South Carolina Power Plants

There were 9 power generating utility companies with 51 power plants with a total rating capacity of 18,827.4 megawatts in 2000. These power plants contain 206 generators with the following breakdown:

96 HY - Hydraulic Turbine (conventional)
54 GT - Combustion (gas) Turbine
37 ST - Steam Turbine - Boiler
16 PS - Hydraulic Turbine - Reversible (pumped storage)
3 IC - Internal Combustion (diesel)

The primary energy source for the 206 generators is as follows:

112 (54.4%) - Water
32 (15.5%) - Diesel Fuel Oil (DFO)
28 (13.6%) - Bituminous Coal (BIT)
25 (12.1%) - Natural Gas (NG)
7 (3.4%) - Nuclear (NUC)
2 (1.0%) - Residual Fuel Oil (RFO)

Table 2.13

Inventory of Power Plants in South Carolina, 1999

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
Abbeville, City of						
	Rocky River	Abbeville	IC1	1.1	IC	DFO
			1	1.8	HY	Water
			2	0.8	HY	Water
Carolina Power & Light						
	Darlington County	Darlington	1	66.8	GT	Nat. Gas
			2	65.8	GT	DFO
			3	66.8	GT	Nat. Gas
			4	65.8	GT	DFO
			5	66.8	GT	Nat. Gas
			6	65.8	GT	DFO
			7	66.8	GT	Nat. Gas
			8	65.8	GT	DFO
			9	66.8	GT	DFO
			10	65.8	GT	DFO
			11	66.8	GT	DFO

(continued)

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
			12	158.0	GT	Nat. Gas
			13	158.0	GT	Nat. Gas
	H. B. Robinson	Darlington	GT1	16.3	GT	Nat. Gas
			1	206.6	ST	BIT
			2	768.7	ST	NUC
Duke Power Co.						
	Bad Creek	Oconee	1	266.3	PS	Water
			2	266.3	PS	Water
			3	266.3	PS	Water
			4	266.3	PS	Water
	Buzzard Roost	Greenwood	HC1	5.0	HY	Water
			HC2	5.0	HY	Water
			HC3	5.0	HY	Water
			6	22.7	GT	DFO
			7	22.7	GT	DFO
			8	22.7	GT	DFO
			9	22.7	GT	DFO
			10	17.8	GT	DFO
			11	17.8	GT	DFO
			12	17.8	GT	DFO
			13	17.8	GT	DFO
			14	17.8	GT	DFO
			15	17.8	GT	DFO
	Catawba	York	*1	1,205.1	ST	NUC
			*2	1,205.1	ST	NUC
	Cedar Creek	Lancaster	1	15.0	HY	Water
			2	15.0	HY	Water
			3	15.0	HY	Water
	Dearborn	Chester	1	15.0	HY	Water
			2	15.0	HY	Water
			3	15.0	HY	Water
	Fishing Creek	Chester	1	9.4	HY	Water
			2	6.0	HY	Water
			3	6.0	HY	Water
			4	9.4	HY	Water
			5	6.0	HY	Water
	Gaston Shoals	Cherokee	3	1.4	HY	Water
			4	1.4	HY	Water
			5	1.4	HY	Water
			6	2.5	HY	Water
	Great Falls	Chester	1	3.0	HY	Water
			2	3.0	HY	Water
			3	3.0	HY	Water
			4	3.0	HY	Water
			5	3.0	HY	Water

(continued)

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
			6	3.0	HY	Water
			7	3.0	HY	Water
			8	3.0	HY	Water
	Jocassee	Pickens	1	153.0	PS	Water
			2	153.0	PS	Water
			3	153.0	PS	Water
			4	153.0	PS	Water
	Keowee	Pickens	1	78.8	HY	Water
			2	78.8	HY	Water
	Oconee	Oconee	1	886.7	ST	NUC
			2	886.7	ST	NUC
			3	893.3	ST	NUC
	Rocky Creek	Fairfield	1	3.0	HY	Water
			2	3.0	HY	Water
			3	3.0	HY	Water
			4	3.0	HY	Water
			5	5.0	HY	Water
			6	5.0	HY	Water
			7	3.0	HY	Water
			8	3.0	HY	Water
	W. S. Lee	Anderson	1	90.0	ST	BIT
			2	90.0	ST	BIT
			3	175.0	ST	BIT
			4	35.1	GT	DFO
			5	35.1	GT	DFO
			6	35.1	GT	DFO
	Wateree	Kershaw	1	11.2	HY	Water
			2	11.2	HY	Water
			3	11.2	HY	Water
			4	11.2	HY	Water
			5	11.2	HY	Water
	Wylie	York	1	15.0	HY	Water
			2	15.0	HY	Water
			3	15.0	HY	Water
			4	15.0	HY	Water
	99 Islands	Cherokee	1	3.0	HY	Water
			2	3.0	HY	Water
			3	3.0	HY	Water
			4	3.0	HY	Water
			5	3.0	HY	Water
			6	3.0	HY	Water
Lockhart Power Co.						
	Lockhart	Union	HY1	4.2	HY	Water
			HY3	4.2	HY	Water
			HY4	4.2	HY	Water
			HY5	1.2	HY	Water
			2	4.2	HY	Water

(continued)

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
Orangeburg, City of						
	North Road Peak	Orangeburg	EAST	7.0	IC	DFO
			WEST	7.0	IC	DFO
	Rowesville Road Plant	Orangeburg	NA1	4.9	GT	Nat. Gas
			NA2	4.9	GT	Nat. Gas
SC Electric & Gas Co. (SCANA)						
	Burton	Beaufort	1	11.5	GT	Nat. Gas
			2	11.5	GT	Nat. Gas
			3	11.5	GT	Nat. Gas
	Canady's Steam	Colleton	1	136.0	ST	BIT
			2	136.0	ST	BIT
	Cogen South	Anderson	1	99.2	ST	BIT
			3	217.6	ST	BIT
	Coit Gt.	Richland	1	19.6	GT	Nat. Gas
			2	19.6	GT	Nat. Gas
	Columbia	Richland	1	1.6	HY	Water
			2	1.6	HY	Water
			3	1.6	HY	Water
			4	1.3	HY	Water
			5	1.3	HY	Water
			6	1.6	HY	Water
			7	1.6	HY	Water
	Cope	Orangeburg	ST1	417.4	ST	BIT
	Faber Place	Charleston	1	11.5	GT	Nat. Gas
	Fairfield PS	Fairfield	1	63.9	PS	Water
			2	63.9	PS	Water
			3	63.9	PS	Water
			4	63.9	PS	Water
			5	63.9	PS	Water
			6	63.9	PS	Water
			7	63.9	PS	Water
			8	63.9	PS	Water
	Hagood	Charleston	4	122.0	GT	Nat. Gas
	Hardeeville	Jasper	1	16.3	GT	DFO
	McMeekin	Lexington	1	146.9	ST	BIT
			2	146.9	ST	BIT
	Neal Shoals	Union	1	1.3	HY	Water
			2	1.3	HY	Water
			3	1.3	HY	Water
			4	1.3	HY	Water
	Parr	Fairfield	1	2.5	HY	Water
			2	2.5	HY	Water
			3	2.5	HY	Water
			4	2.5	HY	Water
			5	2.5	HY	Water
			6	2.5	HY	Water

(continued)

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
	Parr Gt.	Fairfield	GT1	17.6	GT	Nat. Gas
			GT2	17.6	GT	Nat. Gas
			GT3	19.6	GT	Nat. Gas
			GT4	19.6	GT	Nat. Gas
	Saluda	Lexington	1	32.5	HY	Water
			2	32.5	HY	Water
			3	32.5	HY	Water
			4	32.5	HY	Water
			5	67.5	HY	Water
	Summer	Fairfield	*1	953.9	ST	NUC
	Urquhart	Aiken	GT1	19.6	GT	Nat. Gas
			GT2	16.3	GT	Nat. Gas
			GT3	16.3	GT	Nat. Gas
			1	75.0	ST	BIT
			2	75.0	ST	BIT
			3	75.0	ST	BIT
	USDOU SRS	Aiken	1	70.0	ST	BIT
	Wateree	Richland	1	385.9	ST	BIT
			2	386.9	ST	BIT
SC Generating Co., Inc (SCANA).						
	Williams	Berkeley	ST1	632.7	ST	BIT
			1	26.9	GT	Nat. Gas
			2	26.9	GT	Nat. Gas
SC Public Serv Auth. (Santee Cooper)						
	Cross	Berkeley	1	590.9	ST	BIT
			2	556.2	ST	BIT
	D. M. Grainger	Horry	*1	81.6	ST	BIT
			*2	81.6	ST	BIT
	Hilton Head	Beaufort	*1	26.6	GT	DFO
			2	26.6	GT	DFO
			3	64.7	GT	DFO
	Jefferies	Berkeley	H1	30.6	HY	Water
			H2	30.6	HY	Water
			H3	30.6	HY	Water
			H4	30.6	HY	Water
			H6	10.2	HY	Water
			1	50.0	ST	RFO
			2	50.0	ST	RFO
			3	172.8	ST	BIT
			4	172.8	ST	BIT

(continued)

Company	Plant	County	Unit No.	Rating Capacity (megawatts)	Unit Type	Primary Fuel
	Myrtle Beach	Horry	1	11.5	GT	DFO
			2	11.5	GT	DFO
			3	26.6	GT	DFO
			4	26.6	GT	DFO
			5	35.3	GT	DFO
	Spillway	Berkeley	1	2.0	HY	Water
	St. Stephen	Berkeley	*1	28.0	HY	Water
			*2	28.0	HY	Water
			*3	28.0	HY	Water
	Winyah	Georgetown	1	315.0	ST	BIT
			2	315.0	ST	BIT
			3	315.0	ST	BIT
			4	315.0	ST	BIT
U.S. Corps of Engineers-Savannah District						
	J. Strom Thurmond	McCormick	1	40.0	HY	Water
			2	40.0	HY	Water
			3	40.0	HY	Water
			4	40.0	HY	Water
			5	40.0	HY	Water
			6	40.0	HY	Water
			7	40.0	HY	Water

*A jointly-owned plant.

Source: Energy Information Administration, *Inventory of Electric Utility Power Plants in the United States 2000*.

SECTION 3: PETROLEUM

South Carolina Gasoline Consumption and Prices

Gasoline consumption in South Carolina increased by 45.0% during the two-decade period 1980 to 2000. During the same period, the price of gasoline decreased by 4.6%, with the highest recorded average price being $1.38 in 1981. In 2000, 2,842,553 licensed South Carolina drivers with 3.1 million registered vehicles (up 2.3% from 1999) drove 45.5 billion miles (up 3.2% from 1999) on South Carolina highways while consuming 2.2 billion gallons of gasoline (down 0.1% from 1999). South Carolina's annual gasoline fuel consumption trend is similar to the consumption trend of the United States, but as Figure 3.2 illustrates, South Carolina continues to substantially exceed the national average on a per capita basis.

Table 3.1

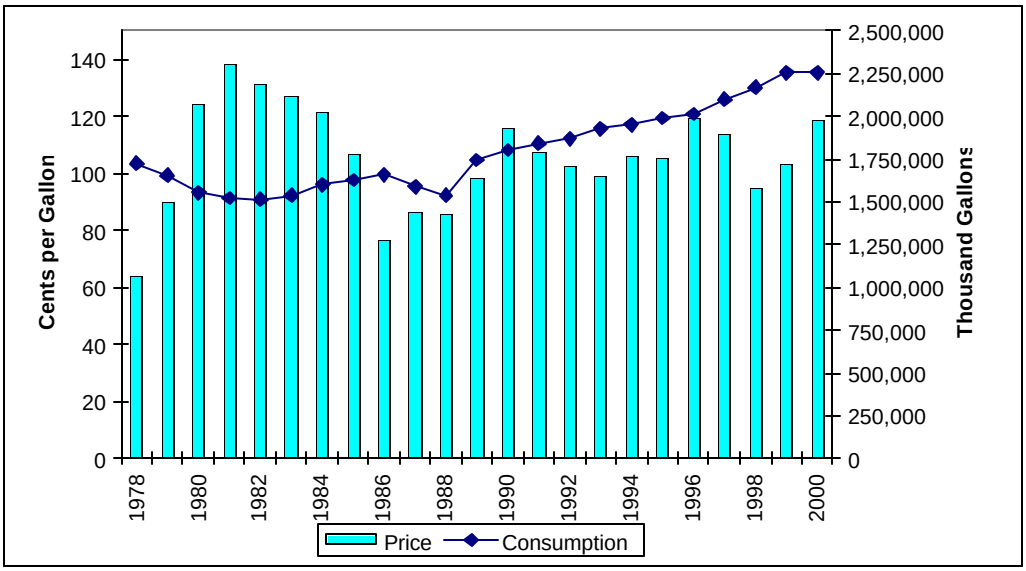
South Carolina Annual Gasoline Consumption and Average Retail Price 1980-2000

Year	Consumption (Thousand Gallons)	Percent Change	Price (Cents per Gallon)	Percent Change
1980	1,554,812	-6.2%	124.70	39.0%
1981	1,522,168	-2.1%	138.60	11.1%
1982	1,515,808	-0.4%	131.60	-5.1%
1983	1,538,168	1.5%	126.80	-3.6%
1984	1,601,789	4.1%	121.80	-3.9%
1985	1,630,017	1.8%	106.9	-99.1%
1986	1,661,798	1.9%	76.6	-28.3%
1987	1,588,587	-4.4%	86.5	13.2%
1988	1,537,034	-3.2%	85.8	-1.2%
1989	1,745,555	13.6%	98.1	15.3%
1990	1,805,128	3.4%	116.1	18.4%
1991	1,840,515	2.0%	107.9	-7.8%
1992	1,872,326	1.7%	102.9	-4.7%
1993	1,929,294	3.0%	99.2	-2.9%
1994	1,950,440	1.1%	106.3	7.1%
1995	1,989,943	2.0%	105.3	-0.9%
1996	2,014,159	1.2%	119.8	13.3%
1997	2,100,203	4.3%	113.6	-5.0%
1998	2,172,260	3.4%	94.6	-16.8%
1999	2,257,696	3.9%	103.0	9.6%
2000	2,255,223	-0.1%	119.0	15.5%

Sources: Federal Highway Administration, *Highway Statistics*; South Carolina Dept. of Revenue; AAA Carolinas Motor Club; and. Energy Information Administration, *Petroleum Marketing Monthly.*

Figure 3.1

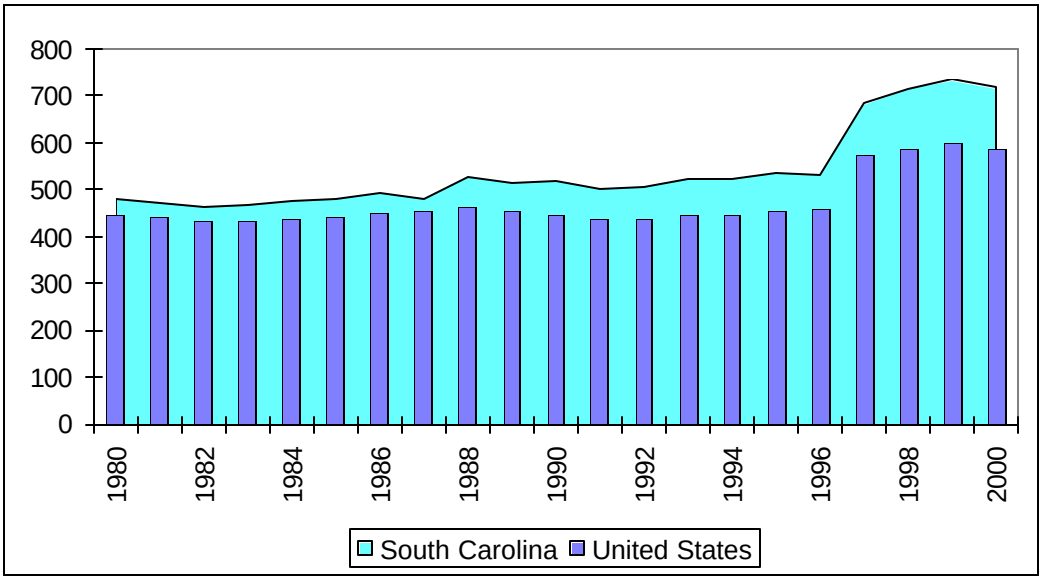
South Carolina Average Annual Retail Gasoline Prices v. Consumption, 1980-2000



Sources: Federal Highway Administration, Highway Statistics; SC Department of Revenue; AAA Carolinas Motor Club; Energy Information Administration, *Petroleum Marketing Monthly*.

Figure 3.2

United States and South Carolina Motor Fuel Consumption per Capita, 1980-2000



Sources: 1978-1996: Energy Information Administration, *State Energy Data Report*; 1997-2000; Federal Highway Administration, *Highway Statistics*.

Table 3.2

South Carolina Monthly Gasoline Consumption, 1990-2000
(Thousand Gallons)

Month	1990	1991	1992	1993	1994	1995
Jan	77,166	139,874	144,713	146,042	150,033	151,943
Feb	190,430	138,951	140,707	144,119	143,505	147,029
Mar	147,388	152,715	159,229	160,540	165,902	171,129
Apr	164,637	154,868	158,049	167,550	165,889	166,803
May	163,362	163,309	159,488	162,637	158,365	171,801
June	157,915	156,183,	156,109	164,326	166,489	173,100
July	161,720	159,837	167,470	173,612	170,454	175,474
Aug	167,094	164,919	161,573	168,546	182,397	175,177
Sept	140,956	160,296	154,719	160,331	161,892	158,545
Oct	144,374	154,234	159,809	157,166	157,184	169,668
Nov	147,263	144,588	147,969	157,555	161,365	165,245
Dec	142,823	150,741	162,491	166,870	166,965	164,029
TOTAL	1,805,128	1,840,515	1,872,326	1,929,294	1,950,440	1,989,943
%Change	3.4%	2.0%	1.7%	3.0%	1.1%	2.0%

Month	1996	1997	1998	1999	2000
Jan	149,093	161,748	168,916	168,526	162,645
Feb	149,384	154,497	158,005	164,524	175,558
Mar	158,155	178,250	181,382	190,297	194,601
Apr	152,823	175,317	179,226	189,616	187,566
May	186,059	181,557	183,487	188,842	200,418
June	177,482	175,071	189,305	190,191	195,851
July	182,531	188,975	196,474	207,052	197,863
Aug	181,507	186,252	190,846	204,733	198,600
Sept	152,157	170,245	178,469	188,721	180,423
Oct	186,362	180,218	185,944	186,608	191,422
Nov	167,956	168,931	173,467	182,570	182,323
Dec	170,650	179,142	186,739	196,016	187,953
TOTAL	2,014,159	2,100,203	2,172,260	2,257,696	2,255,223
%Change	1.2%	4.3%	3.4%	3.9%	-0.1%

Source: South Carolina Department of Revenue; Federal Highway Administration, *Highway Statistics*.

Motor Fuel Consumption per Registered Vehicle

Table 3.3 and Figure 3.3 both illustrate that drivers in South Carolina continue to consume more fuel per registered vehicle than the national average. In 2000, South Carolinians consumed 183 gallons more per registered vehicle than the average vehicle in the United States. Also in 2000, there were 0.48 registered vehicles per capita in South Carolina compared with 0.47 in the United States.

Table 3.3

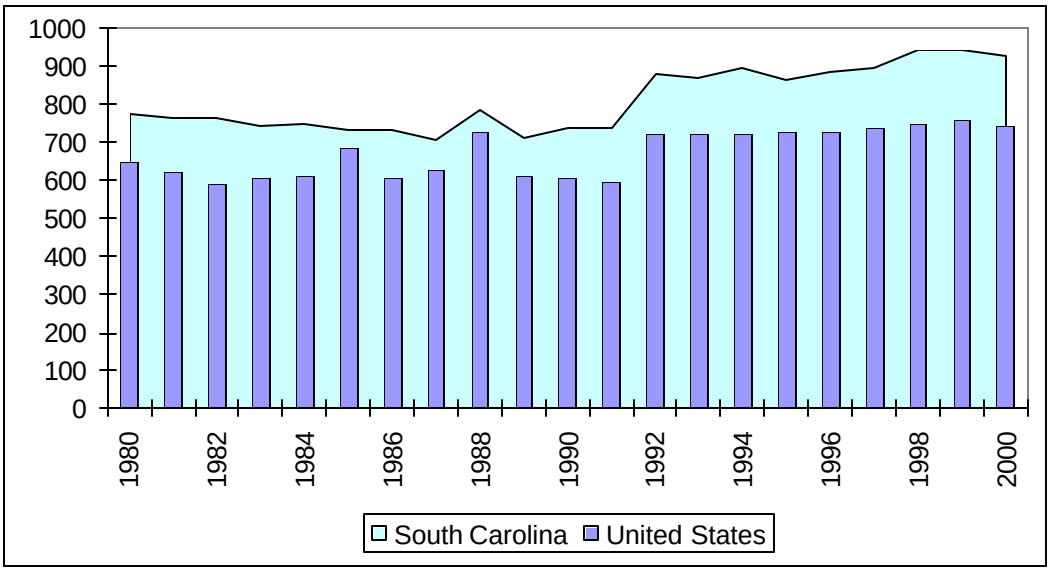
South Carolina and United States Motor Fuel Consumption per Registered Vehicle, 1980-2000

Year	South Carolina		United States	
	Consumption per Registered Vehicle (Gallons)	Percent Change	Consumption per Registered Vehicle (Gallons)	Percent Change
1980	774	-6.0%	649	-7.3%
1981	766	-1.0%	622	-4.2%
1982	765	-0.1%	592	-4.8%
1983	744	-2.7%	609	2.9%
1984	749	0.7%	612	0.5%
1985	731	-2.4%	685	11.9%
1986	735	0.5%	606	-11.5%
1987	706	-3.9%	630	4.0%
1988	788	11.6%	726	15.2%
1989	711	-9.8%	612	-15.7%
1990	738	3.8%	606	-1.0%
1991	737	-0.1%	595	-1.8%
1992	720	-2.3%	608	2.2%
1993	718	-0.3%	600	-1.3%
1994	711	-1.0%	600	0.0%
1995	864	21.5%	726	21.0%
1996	886	2.5%	726	0.0%
1997	897	1.2%	740	1.9%
1998	944	5.2%	747	0.9%
1999	942	-0.2%	758	1.5%
2000	929	-1.4%	746	-1.6%

Sources: Federal Highway Administration, *Highway Statistics*, and South Carolina Department of Revenue.

Figure 3.3

United States and South Carolina Motor Fuel Consumption per Registered Vehicle, 1980-2000



Sources: Federal Highway Administration, *Highway Statistics*, and South Carolina Department of Revenue.

South Carolina Aviation Fuel Consumption

Table 3.4

South Carolina Monthly Aviation Fuel Consumption, 1990-2000
(Gallons)

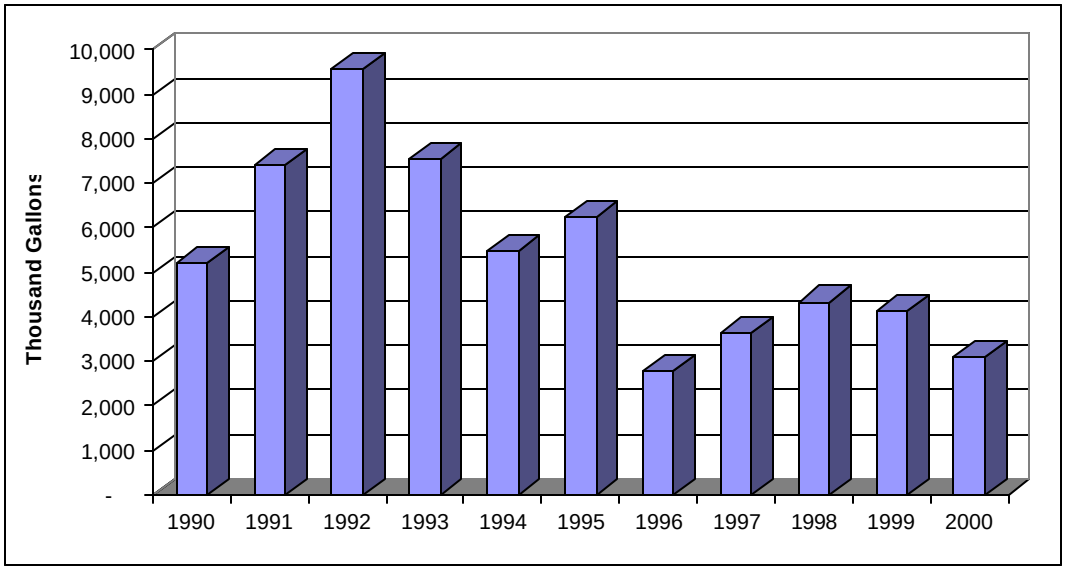
Month	1990	1991	1992	1993	1994	1995
Jan	383,446	339,324	670,660	574,653	442,913	436,230
Feb	361,427	722,592	728,551	451,314	576,866	385,222
Mar	413,282	481,604	1,174,774	611,161	662,901	634,164
Apr	403,203	552,306	876,789	861,048	651,782	412,543
May	532,392	517,508	782,096	671,661	626,811	618,866
June	460,476	482,321	883,131	897,799	527,966	638,966
July	519,659	794,204	765,643	551,340	620,199	551,634
Aug	479,059	790,171	854,902	883,561	-613,261	555,637
Sept	213,853	688,898	810,133	724,844	531,436	550,638
Oct	350,753	688,898	667,262	336,107	424,580	556,127
Nov	604,668	608,612	659,455	560,442	587,126	492,366
Dec	481,329	729,035	690,254	441,420	448,873	403,651
TOTAL	5,203,547	7,395,473	9,563,650	7,565,350	5,488,192	6,236,044
% Change	-11.6%	42.1%	29.3%	-20.9%	-27.5%	13.6%

Month	1996	1997	1998	1999	2000
Jan	301,861	155,815	356,385	250,269	206,928
Feb	223,887	235,287	314,122	290,053	238,032
Mar	249,004	254,266	362,627	406,648	294,796
Apr	203,530	315,255	387,001	496,189	286,941
May	250,117	380,620	329,186	299,902	296,970
June	197,763	323,687	350,677	362,697	247,746
July	261,659	302,410	472,294	398,280	213,705
Aug	232,998	379,149	378,605	328,541	282,143
Sept	196,208	347,625	350,600	396,896	194,000
Oct	243,540	370,920	384,413	311,308	360,335
Nov	226,290	279,629	294,280	320,222	284,078
Dec	174,052	277,378	347,403	281,772	164,043
TOTAL	2,760,909	3,622,041	4,327,593	4,142,777	3,069,717
% Change	-55.7%	31.2%	19.5%	-4.3%	-25.9%

Source: South Carolina Department of Revenue; Federal Highway Administration, *Highway Statistics*.

Figure 3.4

South Carolina Annual Aviation Fuel Consumption, 1990-2000
(Thousand Gallons)



Source: South Carolina Department of Revenue.

South Carolina Highway Diesel Fuel Consumption

During the two-decade period 1980 to 2000, diesel fuel consumption in South Carolina increased by 137.0%. There was an increase of 45.0% in consumption from 1990 to 2000. The largest increases in diesel fuel consumption occurred in 1986, 1989 and 1994.

Table 3.5

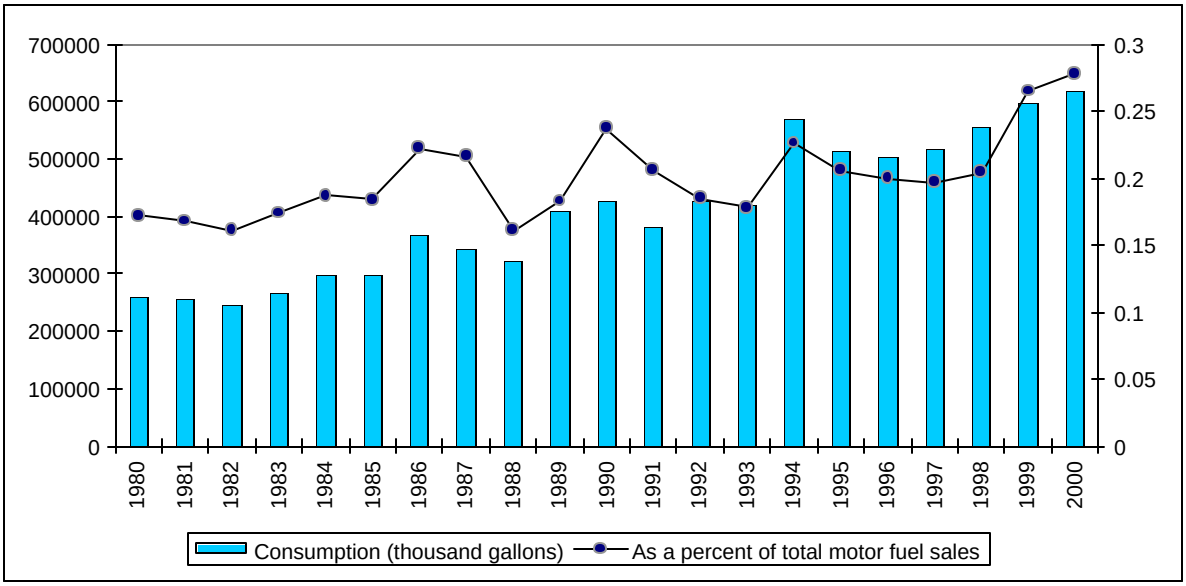
South Carolina Annual Highway Diesel Fuel Consumption 1980-2000

Year	Consumption (Thousand Gallons)	Percent Change	Diesel as a Percent of Total Motor Fuel Sales
1980	261,455	-8.3%	17.2%
1981	255,389	-2.3%	16.8%
1982	244,796	-4.1%	16.1%
1983	266,897	9.0%	17.4%
1984	299,577	12.2%	18.7%
1985	299,050	-0.2%	18.4%
1986	368,570	23.2%	22.2%
1987	343,271	-6.9%	21.6%
1988	321,262	-6.4%	16.1%
1989	410,117	27.7%	18.3%
1990	427,201	4.2%	23.7%
1991	380,015	-11.0%	20.6%
1992	427,848	12.6%	18.5%
1993	418,208	-2.3%	17.8%
1994	568,629	36.0%	22.6%
1995	515,358	-9.4%	20.6%
1996	502,227	-2.5%	20.0%
1997	515,620	2.7%	19.7%
1998	556,525	7.9%	20.4%
1999	596,991	7.3%	26.5%
2000	619,555	3.8%	27.8%

Source: South Carolina Department of Revenue.

Figure 3.5

South Carolina Diesel Fuel Consumption and as a Percent of Total Motor Fuel Sales, 1980-2000



Source: South Carolina Department of Revenue.

Table 3.6

South Carolina Monthly Diesel Fuel Consumption, 1990-2000

Month	1990	1991	1992	1993	1994	1995
Jan	15,762	26,025	32,006	33,299	35,736	40,715
Feb	48,531	29,524	28,382	30,624	31,909	34,553
Mar	30,954	37,231	35,438	9,625	80,940	46,256
Apr	46,331	35,918	41,611	41,577	46,960	50,959
May	34,682	31,585	31,085	34,055	54,340	40,184
June	43,558	29,300	46,093	46,630	49,441	49,768
July	31,861	29,644	32,082	32,004	36,377	40,330
Aug	33,773	29,876	32,469	35,820	39,926	40,434
Sept	38,898	39,518	32,760	44,260	45,923	44,005
Oct	33,754	33,764	42,645	34,248	63,625	47,926
Nov	30,853	28,661	30,735	32,464	37,552	38,128
Dec	38,254	28,969	42,542	43,602	45,900	42,100
TOTAL	427,211	380,015	427,848	418,208	568,629	515,358
%Change	0.5%	-11.0%	12.6%	-2.3%	36.0%	-9.4%

Month	1996	1997	1998	1999	2000
Jan	46,424	41,405	46,657	44,670	45,622
Feb	35,757	39,128	41,285	43,580	51,160
Mar	40,817	42,360	47,921	52,520	58,167
Apr	44,453	44,007	46,887	49,334	51,426
May	41,858	43,281	45,340	48,247	56,072
June	37,975	41,280	48,322	50,659	54,585
July	42,914	42,621	47,395	47,470	48,267
Aug	45,488	42,833	46,587	51,246	54,490
Sept	40,797	43,262	47,028	48,357	48,979
Oct	45,477	47,973	49,480	60,853	50,048
Nov	41,265	43,261	43,976	49,304	51,447
Dec	39,002	44,209	45,647	50,751	49,292
TOTAL	502,227	515,620	556,525	596,991	619,555
%Change	-2.5%	2.7%	7.9%	7.3%	3.8%

Source: South Carolina Department of Revenue.

South Carolina Petroleum Consumption by Type of Product

South Carolina petroleum consumption increased by 17.7% during the period 1979 to 1999. The two petroleum products that were consumed the most during this period were motor gasoline (39.2% increase) and distillate fuel oil (59.8% increase). Quite noticeable during this period was the significant decrease (81.2%) in the consumption of residual fuel, which is used for electric power production and various industrial purposes. Both motor gasoline and distillate fuel oil experienced a dip in consumption in 1982, but have since steadily increased every year. In 1999, motor gasoline was the petroleum product consumed in the largest amount with 60.9%; distillate fuel accounted for 22.0%, and liquefied petroleum gasoline (LPG), residual fuel, jet fuel, kerosene and other accounted for the other petroleum product consumption.

Table 3.7

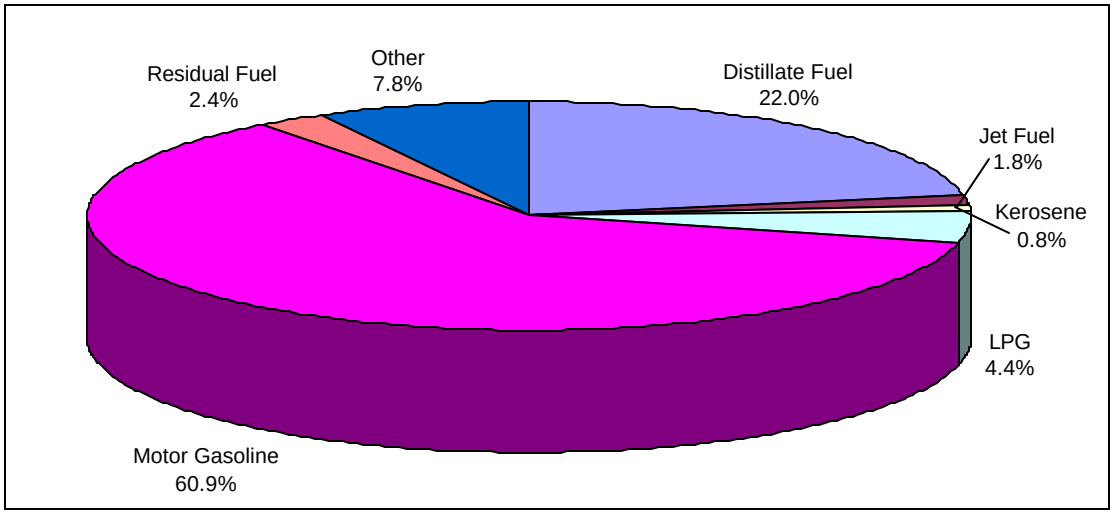
South Carolina Petroleum Consumption by Type of Product, 1979-1999
(Thousand Barrels)

Year	Distillate Fuel[1]	Jet Fuel	Kerosene	LPG[2]	Motor Gasoline	Residual Fuel[3]	Other*	Total	Percent Change
1979	11,918	2,941	1,150	2,968	37,899	10,928	5,837	73,641	-5.1%
1980	10,660	3,062	1,352	3,178	35,517	7,205	6,110	67,084	-8.9%
1981	9,822	2,865	679	2,826	35,600	5,349	7,158	64,299	-4.2%
1982	9,485	2,745	605	2,606	35,446	3,133	5,674	59,694	-7.2%
1983	10,553	2,529	635	2,621	35,896	3,933	5,491	61,658	3.3%
1984	11,510	3,080	427	2,520	37,133	5,013	5,433	65,116	5.6%
1985	11,731	3,184	1,484	3,161	37,719	2,921	5,550	65,750	1.0%
1986	11,696	3,168	1,181	2,880	39,283	2,401	6,762	67,371	2.5%
1987	11,850	3,193	1,359	3,620	38,522	2,458	7,712	68,714	2.0%
1988	12,606	3,229	1,484	3,536	42,828	3,274	8,671	75,628	10.1%
1989	12,499	3,117	1,426	3,672	42,171	2,743	7,567	73,195	-3.2%
1990	14,538	2,939	659	2,914	43,264	2,450	8,084	74,848	2.3%
1991	15,289	3,442	851	3,606	42,561	2,433	9,647	77,829	4.0%
1992	13,737	2,586	524	3,597	43,441	2,394	10,708	76,987	-1.1%
1993	13,652	2,024	760	3,660	45,081	3,812	10,306	79,295	3.0%
1994	15,516	1,451	474	3,871	45,249	2,607	10,198	79,366	0.1%
1995	14,902	1,027	574	3,826	46,973	2,689	10,650	80,641	1.6%
1996	15,600	1,292	673	3,666	47,427	3,033	5,670	77,361	-4.1%
1997	16,354	1,328	694	6,150	49,468	2,643	6,877	83,514	8.0%
1998	18,917	1,436	837	4,601	51,216	2,339	6,589	85,935	2.9%
1999	19,043	1,536	667	3,858	52,774	2,059	6,768	86,705	0.9%

*Other includes asphalt and road oil, aviation gasoline, lubricants, and other.
[1]Distillate fuel includes fuel oils No. 1, No. 2, and No. 4, and diesel fuels No.1, No. 2 and No. 4; these products are used primarily for space heating, on-and-off highway diesel engine fuel, and electric power generation.
[2]Liquefied petroleum gas (propane).
[3]Residual fuel includes products known as No. 5 and No. 6 fuel oil and heavy diesel oil; mostly used for industrial purposes.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 3.6

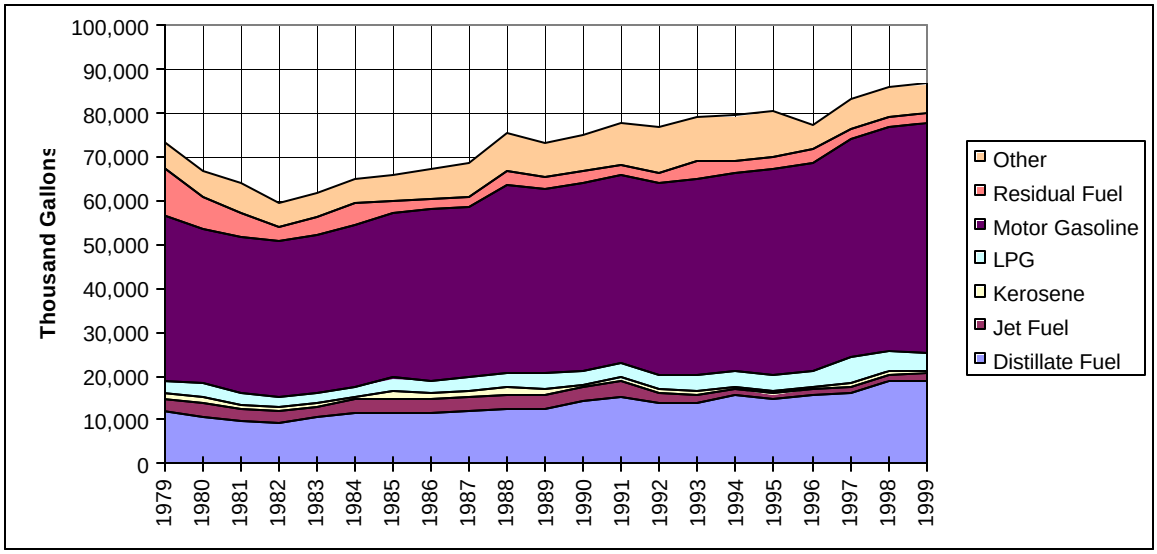
South Carolina Petroleum Consumption by Type of Product, 1999



Source: Energy Information Administration, *State Energy Data Report*.

Figure 3.7

South Carolina Petroleum Consumption by Type of Product, 1979-1999



Source: Energy Information Administration, *State Energy Data Report*.

South Carolina Petroleum Consumption by Economic Sector

As indicated in Table 3.7, petroleum consumption increased by 17.7% in South Carolina from 1979 to 1999. Most of the increase occurred in the transportation sector, where petroleum use increased by 42.9%. Petroleum use in the transportation sector reached its lowest point during the recession years of 1980-1983, but has since increased nearly every year. In 1999, the transportation sector accounted for 80.2% of all petroleum use in South Carolina, followed by the industrial sector, which accounted for 13.7% of the total petroleum use.

Table 3.8

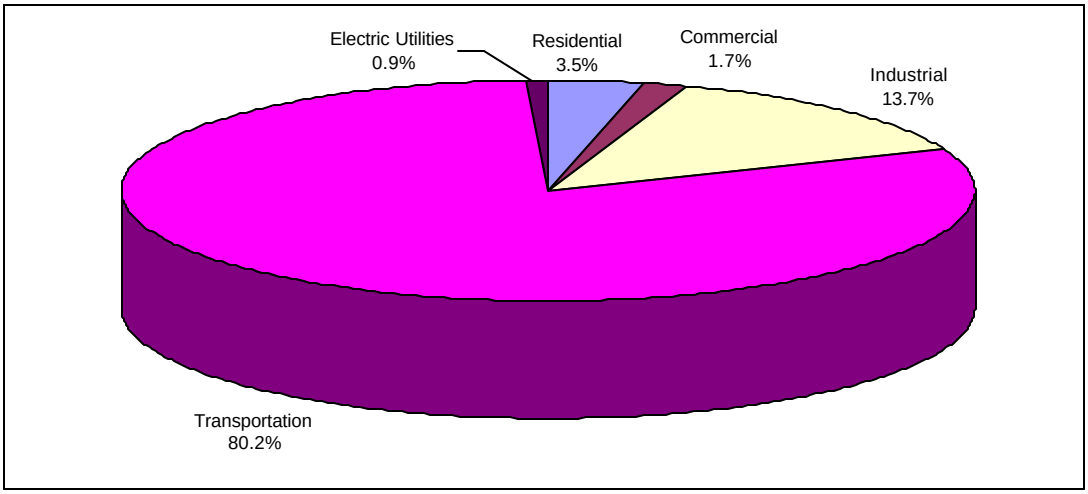
South Carolina Petroleum Consumption by Economic Sector, 1979-1999
(Thousand Barrels)

Year	Residential	Commercial	Industrial	Transportation	Electric Utilities	TOTAL
1979	4,407	1,483	15,222	48,645	3,885	73,641
1980	4,290	1,047	13,412	45,686	2,647	67,084
1981	3,542	1,094	12,241	45,318	2,104	64,299
1982	2,963	939	9,946	45,369	477	59,694
1983	3,231	1,509	10,342	46,437	140	61,658
1984	3,146	1,456	11,417	48,955	143	65,116
1985	4,223	1,527	10,870	48,936	184	65,750
1986	3,845	1,326	11,264	50,819	118	67,371
1987	4,523	1,551	12,613	49,913	116	68,714
1988	4,371	1,710	14,366	54,985	195	75,628
1989	4,556	1,608	13,123	53,622	285	73,195
1990	3,241	1,189	13,230	57,063	125	74,848
1991	3,698	1,026	14,910	58,052	144	77,829
1992	3,248	1,214	15,616	56,751	159	76,987
1993	3,619	1,306	16,081	58,087	199	79,295
1994	3,224	1,161	15,269	59,437	277	79,366
1995	3,246	1,438	16,033	59,655	268	80,641
1996	3,235	1,415	11,665	60,738	306	77,361
1997	3,151	1,491	14,860	63,555	457	83,514
1998	2,847	1,941	13,089	67,249	809	85,935
1999	3,038	1,474	11,871	69,514	807	86,705

*Figures do not necessarily sum to totals due to independent rounding.
Source: Energy Information Administration, *State Energy Data Report*.

Figure 3.8

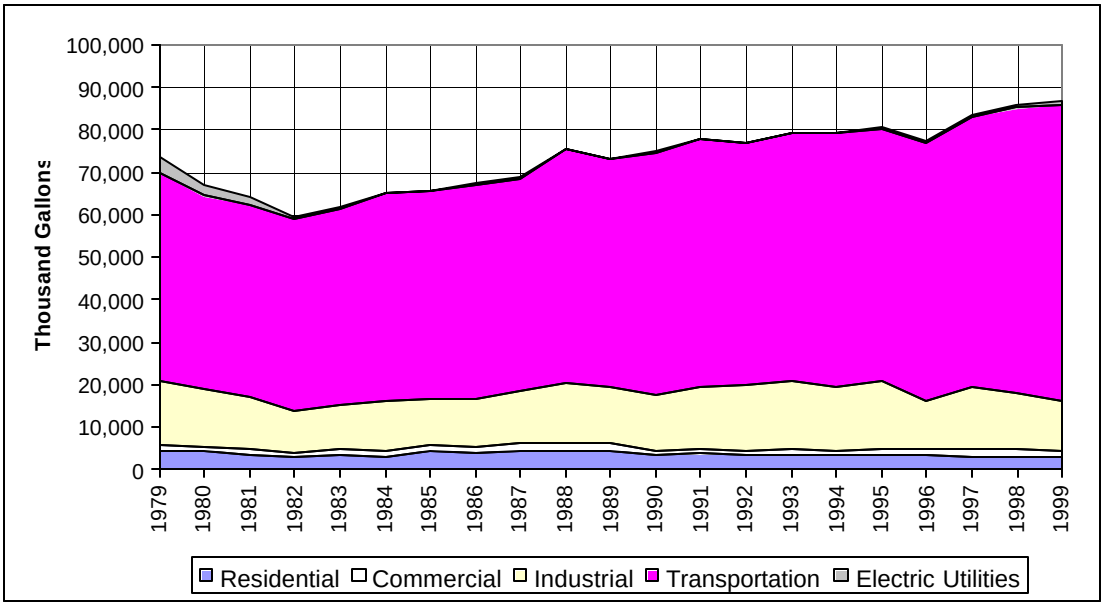
South Carolina Petroleum Consumption by Economic Sector, 1999



Source: Energy Information Administration, *State Energy Data Report*.

Figure 3.9

South Carolina Petroleum Consumption by Economic Sector, 1979-1999



Source: Energy Information Administration, *State Energy Data Report*.

Distillate Fuel Oil Consumption

Distillate fuel oil consumption in South Carolina increased 66.8% during the period 1980 to 2000. The largest increase occurred in the transportation sector with 145.0%, followed by the commercial sector with an increase of 50.5%. Significant decreases were experienced in both the residential and industrial sectors during this same period. As Figure 3.10 illustrates, the transportation sector accounted for 89.6% of all distillate fuel oil consumed in South Carolina in 2000.

Table 3.9

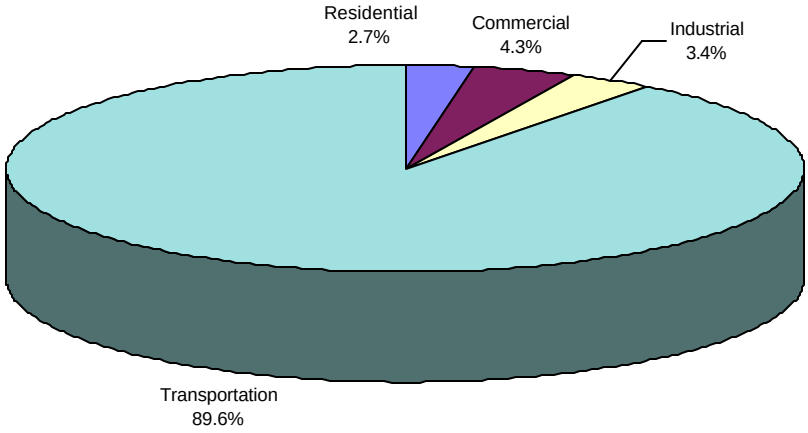
South Carolina Consumption of Distillate Fuel Oil by End-Use, 1980-2000
(Million Gallons)

Year	Residential	Commercial	Industrial	Transportation	TOTAL	Percent Change
1980	66.4	20.2	78.7	258.5	423.8	-12.2%
1981	60.0	18.2	75.5	237.8	391.5	-7.6%
1982	47.6	17.0	63.0	262.6	390.2	-0.3%
1983	49.3	34.9	61.8	291.6	437.6	12.1%
1984	50.6	35.8	63.4	327.6	477.4	9.1%
1985	48.4	35.3	71.3	329.9	484.9	1.6%
1986	49.3	29.5	64.3	343.2	486.3	0.3%
1987	58.8	36.4	58.6	339.1	492.9	1.4%
1988	47.0	44.3	70.2	359.8	521.3	5.8%
1989	53.8	38.8	80.1	341.5	514.2	-1.4%
1990	42.4	25.5	81.9	455.9	605.7	17.8%
1991	41.9	22.0	88.3	484.5	636.7	5.1%
1992	29.0	28.2	74.7	439.1	571.0	-10.3%
1993	34.9	35.6	65.7	431.2	567.4	-0.6%
1994	28.0	27.3	56.2	528.8	640.3	12.8%
1995	28.1	40.7	77.4	471.2	617.4	-3.6%
1996	30.3	41.1	90.5	482.1	644.0	4.3%
1997	23.3	45.6	21.0	514.3	604.2	-6.2%
1998	20.3	64.3	23.3	524.4	632.3	4.7%
1999	21.2	44.0	31.7	603.4	700.3	10.8%
2000	19.4	30.4	23.7	633.3	706.8	0.9%

Note: The term distillate fuel includes products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels.
Sources: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

Figure 3.10

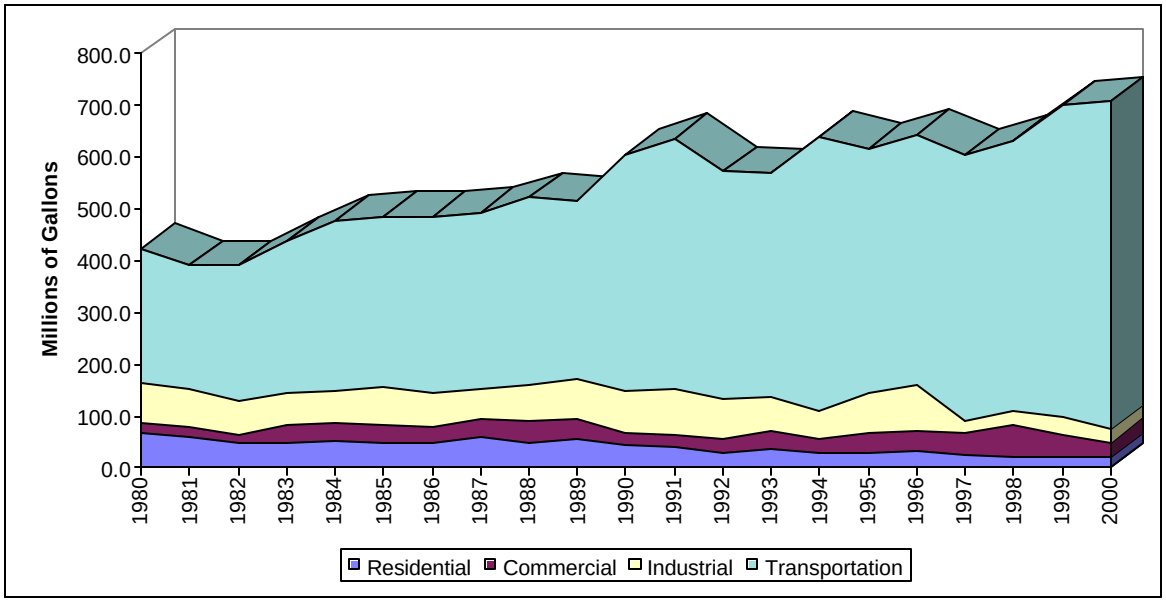
South Carolina Distillate Fuel Oil Consumption by Sector, 2000



Source: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

Figure 3.11

South Carolina Consumption of Distillate Fuel Oil by Sector, 1980-2000



Source: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

South Carolina Kerosene Consumption

Kerosene consumption in South Carolina has been gradually declining over the past 20 years, experiencing a 50.8% decrease from 1980 to 2000. In 2000, as Figure 3.12 indicates, the residential sector accounted for 77.4% of all kerosene consumption in South Carolina, followed by the industrial sector with 14.3% and the commercial sector with 8.2% of the total.

Table 3.10

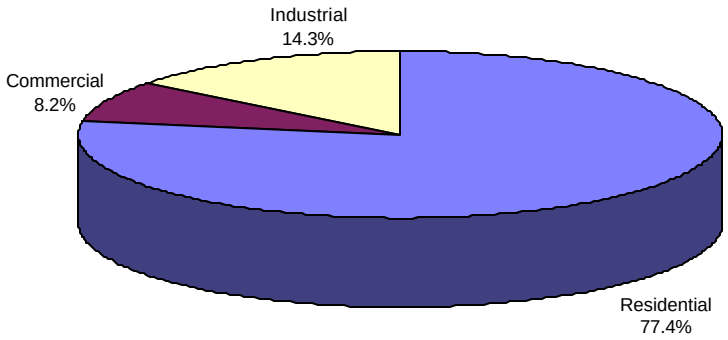
South Carolina Consumption of Kerosene by End-Use
1980-2000
(Million Gallons)

Year	Residential	Commercial	Industrial	TOTAL	Percent Change
1980	50.4	1.0	5.3	56.7	17.4%
1981	23.2	1.2	4.1	28.5	-49.7%
1982	22.0	1.0	2.3	25.3	-11.2%
1983	21.2	1.0	4.4	26.6	5.1%
1984	15.4	0.5	2.0	17.9	-32.7%
1985	50.9	2.0	9.4	62.3	248.0%
1986	41.7	2.3	5.6	49.6	-20.4%
1987	48.5	2.2	6.4	57.1	15.1%
1988	25.8	1.0	7.4	34.2	-40.1%
1989	24.3	3.0	7.1	34.4	0.6%
1990	15.2	0.5	4.0	19.7	-42.7%
1991	20.3	0.5	4.6	25.4	28.9%
1992	18.5	0.6	2.9	22.0	-13.4%
1993	27.1	0.8	3.9	31.8	44.5%
1994	15.6	1.1	3.2	19.9	-37.4%
1995	19.7	1.1	3.2	24.0	20.6%
1996	23.5	1.0	3.7	28.2	17.5%
1997	25.6	0.7	2.6	28.9	2.5%
1998	28.5	2.0	4.2	34.7	20.1%
1999	23.2	1.3	3.0	27.5	-20.7%
2000	21.6	2.3	4.0	27.9	1.5%

Source: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

Figure 3.12

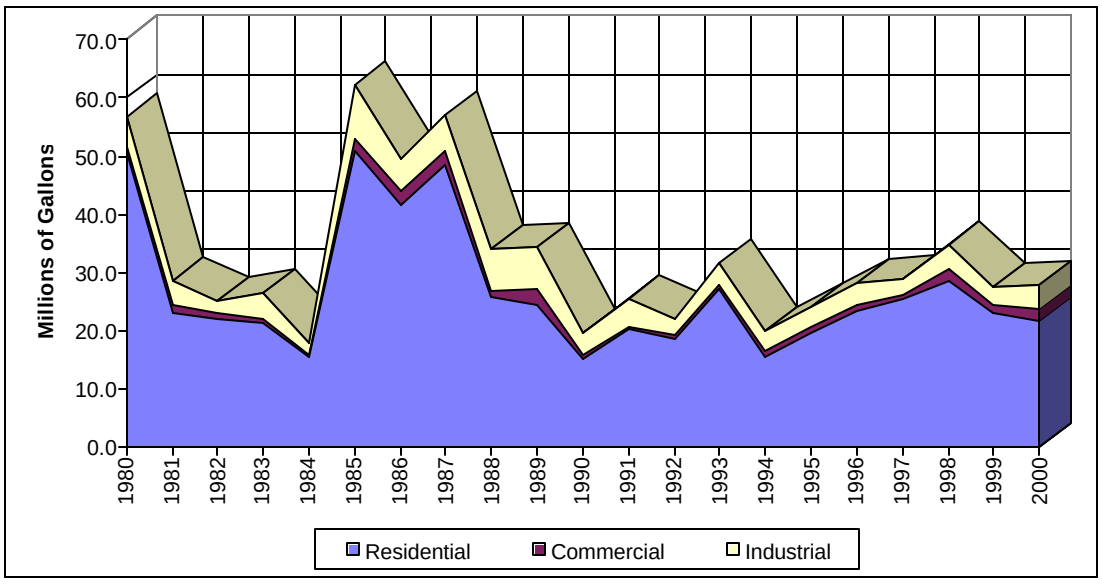
South Carolina Kerosene Consumption by Sector, 2000



Source: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

Figure 3.13

South Carolina Kerosene Consumption by Sector, 1980-2000



Source: Energy Information Administration, *State Energy Data Report* and *Fuel Oil and Kerosene Sales*.

Selected Fuel Oil Prices in South Carolina

South Carolina prices to end users for No. 2 distillate fuel oil increased by 8.9% during the period 1983 to 2000, and rose by 64% from 1999 to 2000. From 1983 to 2000, kerosene prices increased by 18.4% and 48.6% from 1999 to 2000. Residual fuel price data was unavailable for 2000.

Table 3.11

South Carolina Prices of No. 2 Distillate, Kerosene, and Residual Fuel Oils, 1983-2000
(Cents per Gallon excluding Taxes)

Year	No. 2 Distillate			Kerosene			Residual Fuel		
	Sales to End Users	Percent Change	Sales for Resales	Sales to End Users	Percent Change	Sales for Resales	Sales to End Users	Percent Change	Sales for Resales
1983	84.0	N/A	81.9	105.4	N/A	89.6	62.6	N/A	*
1984	83.3	-0.8%	81.6	108.5	2.9%	91.4	69.4	10.9%	68.9
1985	79.0	-5.2%	77.5	102.0	-6.0%	88.0	64.1	-7.6%	64.0
1986	47.7	-39.6%	46.4	90.1	-11.7%	62.5	38.1	-40.6%	44.6
1987	55.0	15.3%	53.0	100.5	11.5%	58.8	42.4	11.3%	*
1988	49.7	-9.6%	47.0	93.4	-7.1%	55.5	34.2	-19.3%	30.5
1989	57.3	15.3%	55.7	91.4	-2.1%	67.3	40.0	17.0%	38.2
1990	73.8	28.8%	69.0	110.8	21.2%	87.7	46.3	15.8%	37.3
1991	64.9	-12.1%	62.4	126.7	14.4%	75.8	36.9	-20.3%	*
1992	61.0	-6.0%	58.7	111.1	-12.3%	65.5	37.2	0.8%	**
1993	58.7	-3.8%	55.0	N/A	N/A	61.6	*	N/A	*
1994	54.6	-7.0%	51.0	N/A	N/A	60.5	*	N/A	*
1995	55.3	1.3%	51.8	93.8	N/A	57.2	*	N/A	37.2
1996	67.1	21.3%	63.5	100.3	6.9%	71.0	48.7	N/A	*
1997	63.3	-5.7%	58.3	106.3	6.0%	65.7	45.6	-6.4%	41.1
1998	47.6	-24.8%	42.6	91.5	-13.9%	48.8	*	N/A	30.2
1999	55.8	17.2%	50.5	84.0	-8.2%	52.4	*	N/A	31.7
2000	91.5	64.0%	87.5	124.8	48.6%	105.0	*	N/A	*

Note: No. 2 distillate includes No. 2 fuel oil and/or No. 2 diesel fuel.
*Withheld to avoid disclosure of individual company data.
**No data reported.
Source: Energy Information Administration, *Petroleum Marketing Annual*.

No. 2 Distillate Prices

No. 2 distillate average prices increased by 24.8% during the period 1990 to 2000. Residential sector prices increased by 21.4%, commercial sector prices rose by 32.4%, industrial sector prices increased by 29.3%, retail outlet prices increased by 16.6%, and all other sectors experienced a rise of 22.7%. There was a significant increase in prices affecting every sector in 2000.

Table 3.12

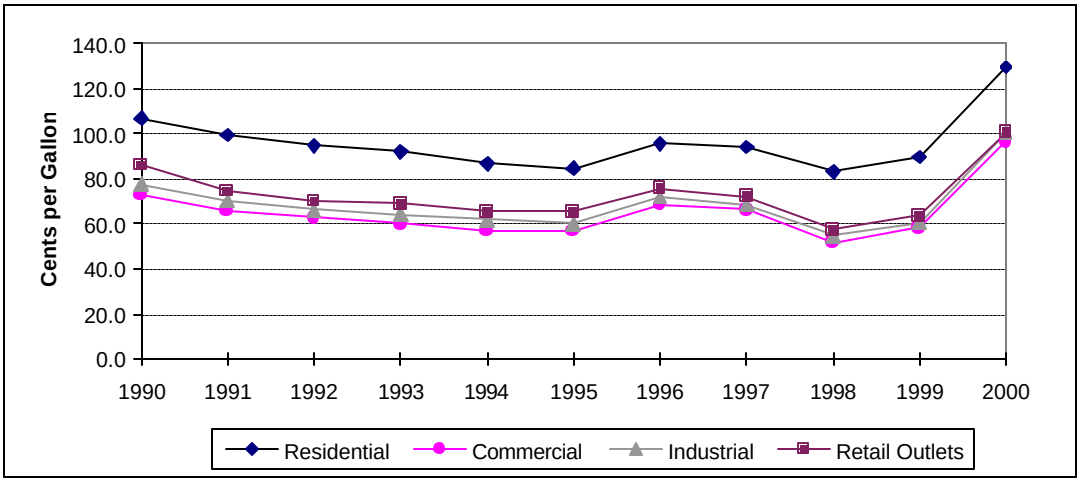
South Carolina No. 2 Distillate Prices by Sales Type, 1990-2000*
(Cents per Gallon Excluding Taxes)

Year	Residential	Commercial	Industrial	Retail Outlets	Other	Average	Percent Change
1990	106.8	72.9	77.7	86.2	81.0	81.1	N/A
1991	99.6	65.7	70.1	74.5	71.6	72.2	-11.0%
1992	94.8	62.9	66.5	70.3	68.6	70.2	-2.8%
1993	92.2	60.1	64.2	69.0	65.8	67.4	-4.0%
1994	86.6	57.0	61.9	65.4	63.7	63.5	-5.8%
1995	84.8	57.0	60.0	65.4	62.8	62.9	-0.9%
1996	95.5	68.5	72.0	75.7	73.6	73.9	17.5%
1997	94.1	66.3	68.5	72.2	71.3	71.0	-3.9%
1998	83.4	52.0	54.6	57.3	56.2	56.4	-20.6%
1999	89.7	58.3	60.8	63.7	61.1	62.9	11.5%
2000	129.7	96.5	100.5	100.5	99.4	101.2	60.9%

*These are the average annual prices for No. 2 distillate for PAD District I, Subdistrict C, which includes South Carolina (Southeast Region).
Source: Energy Information Administration, *Petroleum Marketing Annual*.

Figure 3.14

South Carolina No. 2 Distillate Prices by Sales Type, 1990-2000



Source: Energy Information Administration, *Petroleum Marketing Annual*.

SECTION 4: NATURAL GAS

South Carolina Customers Served by Investor-Owned Natural Gas Utilities

The number of residential customers served by investor-owned natural gas companies increased by 242,291 (114.8%) during the period 1980 to 2000. The commercial and small industrial sectors saw customer growth of 29,719 (138.9%), and the large industrial sector experienced an increase of 971 (119.3%) in customer numbers. Altogether, there was an increase of 272,980 (117.0%) in the number of customers served by privately owned natural gas utilities from 1980 to 2000. Natural gas sales for resale have remained relatively constant. The privately owned natural gas companies are South Carolina Electric and Gas, South Carolina Pipeline Corporation, Piedmont Natural Gas, and United Cities Gas Company.

Table 4.1

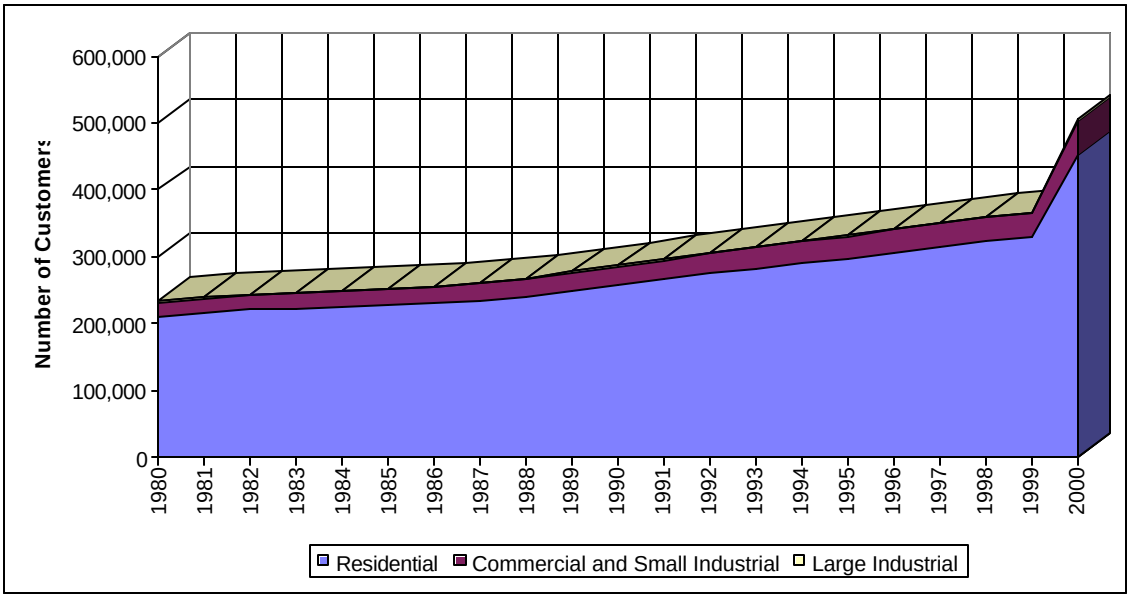
South Carolina Customers Served by Investor-Owned Natural Gas Utilities, 1980-2000*

Year	Residential	Commercial and Small Industrial	Large Industrial	Sales for Resale	Total Customers	Percent Change
1980	210,992	21,400	814	14	233,220	2.0%
1981	216,419	22,008	825	12	239,264	2.6%
1982	220,828	22,360	844	12	244,044	2.0%
1983	222,952	22,837	890	12	246,691	1.1%
1984	224,976	23,460	892	13	249,341	1.1%
1985	227,336	24,041	926	21	252,324	1.2%
1986	230,192	24,792	976	22	255,982	1.4%
1987	234,138	25,805	932	25	260,900	1.9%
1988	239,974	26,852	899	16	267,741	2.6%
1989	248,722	27,938	903	16	277,579	3.7%
1990	256,902	28,727	906	16	286,551	3.2%
1991	265,626	29,734	910	16	296,286	3.4%
1992	275,259	30,622	906	16	306,803	3.5%
1993	282,551	31,438	917	16	314,922	2.6%
1994	290,080	32,299	952	15	323,346	2.7%
1995	297,878	33,233	1,085	15	332,211	2.7%
1996	306,636	34,480	1,094	15	342,225	3.0%
1997	314,554	35,570	1,140	15	351,279	2.6%
1998	322,313	36,471	1,171	15	359,970	2.5%
1999	328,400	37,118	1,114	15	366,647	1.9%
2000	453,283	51,119	1,785	13	506,200	38.1%

*Note: This table does not include data from publicly-owned natural gas companies since its availability was limited to a short time span. This was not conducive to a viable trend analysis. Future editions of this report may contain such data.
Source: South Carolina Public Service Commission.

Figure 4.1

South Carolina Customers Served by Investor-Owned Natural Gas Utilities by Sector, 1980-2000



Source: South Carolina Public Service Commission.

South Carolina Annual Deliveries of Natural Gas to End-Use Customers

End-use deliveries of natural gas in South Carolina were 29.8% higher in 2000 than in 1980. Most of the increase occurred in the industrial sector, where natural gas deliveries increased by 28.7%. On a comparative level, the industrial sector accounted for 64.3% of all natural gas deliveries in South Carolina in 2000, while accounting for 52.8% in the United States.

Table 4.2

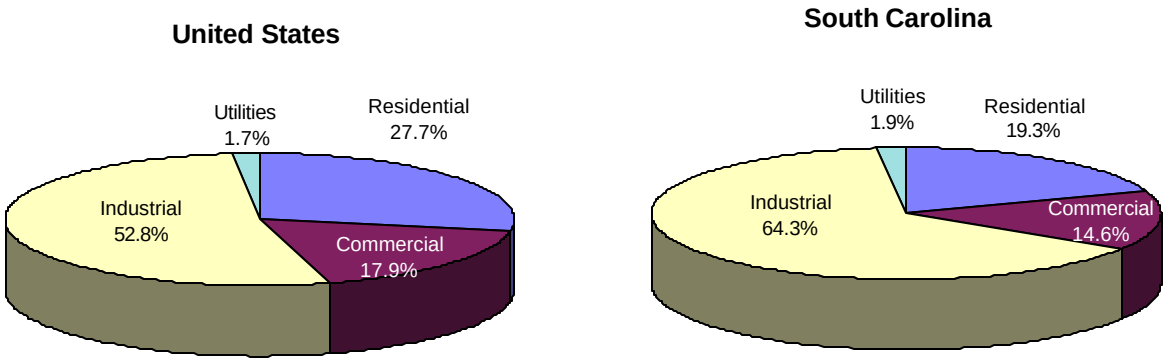
South Carolina Annual Deliveries of Natural Gas to End-Use Customers, 1980-2000
(Million Cubic Feet)

Year	Residential	Commercial	Industrial	Utilities	Total	Percent Change
1980	19,932	15,174	75,234	5,783	116,123	N/A
1981	20,210	15,682	73,478	5,314	114,684	-1.2%
1982	18,347	15,844	63,086	546	97,823	-14.7%
1983	19,101	16,540	61,659	597	97,897	0.1%
1984	19,048	16,555	68,240	268	104,111	6.3%
1985	16,435	15,271	63,038	484	95,228	-8.5%
1986	18,103	15,421	59,106	1,387	94,017	-1.3%
1987	20,200	17,195	63,340	538	101,273	7.7%
1988	20,648	17,290	69,575	2,378	109,891	8.5%
1989	20,262	16,250	73,911	2,705	113,128	2.9%
1990	18,623	16,032	87,912	6,975	129,542	14.5%
1991	19,611	15,795	85,790	9,824	131,020	1.1%
1992	22,934	16,644	94,328	1,794	135,700	3.6%
1993	24,093	16,764	94,892	1,850	137,599	1.4%
1994	23,484	17,870	97,501	3,004	141,859	3.1%
1995	25,164	18,868	98,332	6,615	148,979	5.0%
1996	29,406	20,329	95,493	1,206	146,434	-1.7%
1997	25,475	20,713	115,115	2,731	164,034	12.0%
1998	25,315	19,886	104,878	5,895	155,974	-4.9%
1999	25,681	20,547	102,464	5,119	155,811	-1.2%
2000	29,109	21,928	96,846	2,808	150,691	-2.2%

Source: Energy Information Administration, *Natural Gas Annual* and *Natural Gas Monthly.*

Figure 4.2

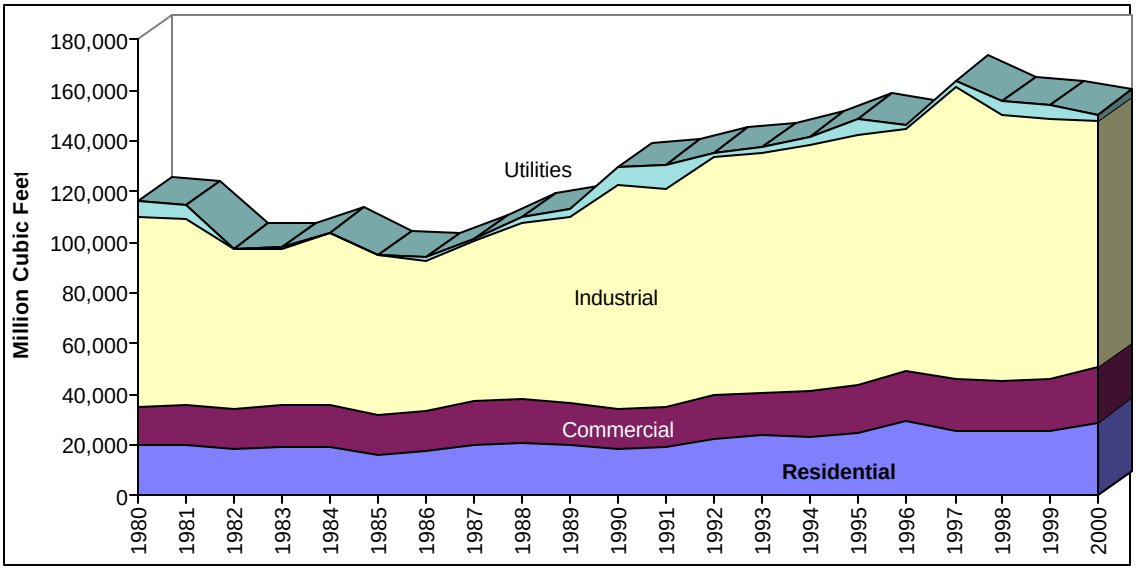
United States and South Carolina Annual Deliveries of Natural Gas to End-Use Customers, 2000



Source: Energy Information Administration, *Natural Gas Monthly.*

Figure 4.3

South Carolina Annual Deliveries of Natural Gas to End-Use Customers, 1980-2000



Source: Energy Information Administration, *Natural Gas Annual* and *Natural Gas Monthly.*

South Carolina Monthly Deliveries of Natural Gas

Table 4.3

South Carolina Monthly Deliveries of Natural Gas to End-Use Customers, 1990-2000
(Million Cubic Feet)

1990

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	4,972	2,612	5,760	8	13,352
Feb	2,636	1,755	5,442	11	9,844
Mar	2,292	1,678	6,474	12	10,456
Apr	1,565	1,344	6,312	13	9,234
May	750	1,123	6,299	28	8,200
Jun	447	903	6,542	404	8,296
Jul	367	843	8,846	1,798	11,854
Aug	347	838	9,787	2,020	12,992
Sep	376	879	9,301	1,898	12,454
Oct	484	974	8,866	709	11,033
Nov	1,608	1,326	7,581	66	10,581
Dec	2,781	1,760	6,926	8	11,475
TOTAL	18,625	16,035	88,136	6,975	129,771
%TOTAL	14.4%	12.4%	67.9%	5.4%	100.0%

1991

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	3,764	2,199	6,903	10	12,876
Feb	3,740	2,076	6,453	15	12,284
Mar	2,875	1,746	7,392	158	12,171
Apr	1,318	1,143	7,017	173	9,651
May	604	908	7,013	652	9,177
Jun	439	818	6,984	491	8,732
Jul	375	810	7,068	4,174	12,427
Aug	370	859	7,415	3,869	12,513
Sep	390	875	7,493	254	9,012
Oct	645	952	7,806	11	9,414
Nov	1,969	1,492	7,405	10	10,876
Dec	3,122	1,917	6,841	7	11,887
TOTAL	19,611	15,795	85,790	9,824	131,020
%TOTAL	15.0%	12.1%	65.5%	7.5%	100.0%

1992

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	4,196	2,251	6,973	15	13,435
Feb	4,064	2,135	7,634	3	13,836
Mar	2,645	1,727	8,983	793	14,148
Apr	2,291	1,422	8,187	13	11,913
May	1,032	1,057	8,182	10	10,281
Jun	596	940	8,145	202	9,883
Jul	423	817	7,945	525	9,710
Aug	385	877	7,729	82	9,073
Sep	408	869	7,810	42	9,129
Oct	790	994	7,607	22	9,413
Nov	1,747	1,328	8,329	82	11,486
Dec	3,777	2,063	6,992	5	12,837
TOTAL	22,354	16,480	94,516	1,794	135,144
%TOTAL	16.5%	12.2%	69.9%	1.3%	100.0%

1993

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	4,232	2,225	7,909	17	14,383
Feb	4,247	2,114	7,408	20	13,789
Mar	4,230	2,158	8,723	69	15,180
Apr	2,532	1,478	7,967	21	11,998
May	947	988	7,301	24	9,260
Jun	495	861	7,884	311	9,551
Jul	402	826	7,449	806	9,483
Aug	373	834	8,188	417	9,812
Sep	387	830	7,195	132	8,544
Oct	624	983	8,487	6	10,100
Nov	2,009	1,436	8,801	10	12,256
Dec	3,615	2,031	7,580	17	13,243
TOTAL	24,093	16,764	94,892	1,850	137,599
%TOTAL	17.5%	12.2%	69.0%	1.3%	100.0%

1994

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	5,993	2,931	6,160	6	15,090
Feb	4,965	2,547	6,891	19	14,422
Mar	3,022	1,968	9,089	28	14,107
Apr	1,525	1,235	8,497	53	11,310
May	713	1,062	8,095	86	9,956
Jun	528	1,387	8,433	329	10,677
Jul	438	946	7,546	38	8,968
Aug	429	985	8,569	11	9,994
Sep	444	983	8,625	63	10,115
Oct	734	1,130	10,417	1,074	13,355
Nov	1,589	1,411	9,636	632	13,268
Dec	3,088	1,897	9,360	665	15,010
TOTAL	23,468	18,482	101,318	3,004	146,272
%TOTAL	16.0%	12.6%	69.3%	2.1%	100.0%

1995

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	4,919	2,628	7,001	7	14,555
Feb	5,128	2,651	6,975	3	14,757
Mar	3,604	2,101	10,075	695	16,475
Apr	1,584	1,380	8,702	7	11,673
May	746	1,043	8,954	185	10,928
Jun	510	979	9,437	471	11,397
Jul	472	949	7,836	825	10,082
Aug	397	954	8,498	1,897	11,746
Sep	474	1,040	8,138	1,441	11,093
Oct	646	1,052	8,338	1,064	11,100
Nov	2,262	1,669	8,287	10	12,228
Dec	4,422	2,385	6,963	12	13,782
TOTAL	25,164	18,831	99,204	6,617	149,816
%TOTAL	16.8%	12.6%	66.2%	4.4%	100.0%

1996

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	6,539	3,092	6,107	4	15,742
Feb	5,887	2,743	6,330	5	14,965
Mar	3,706	2,160	7,668	9	13,543
Apr	2,968	1,858	8,275	9	13,110
May	945	1,424	8,236	189	10,794
Jun	542	1,270	7,826	279	9,917
Jul	421	927	7,710	239	9,297
Aug	415	950	7,991	64	9,420
Sep	472	1,033	7,925	350	9,780
Oct	792	1,150	8,800	23	10,765
Nov	2,148	1,631	8,603	16	12,398
Dec	4,295	2,414	8,462	20	15,191
TOTAL	29,130	20,652	93,933	1,207	144,922
%TOTAL	20.1%	14.3%	64.8%	0.8%	100.0%

1997

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	5,097	2,799	8,152	11	16,059
Feb	4,994	2,689	8,054	4	15,741
Mar	2,592	1,816	9,152	12	13,572
Apr	1,776	1,379	9,260	72	12,487
May	1,230	1,278	9,122	67	11,697
Jun	701	1,214	8,451	621	10,987
Jul	512	997	17,104	922	19,535
Aug	444	1,019	10,653	422	12,538
Sep	466	1,904	8,883	212	11,465
Oct	631	1,176	8,239	240	10,286
Nov	2,399	1,771	8,702	112	12,984
Dec	4,634	2,671	9,344	35	16,684
TOTAL	25,476	20,713	115,116	2,730	164,035
%TOTAL	15.5%	12.6%	70.2%	1.7%	100.0%

1998

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	5,432	2,955	9,645	33	18,065
Feb	5,177	2,781	9,129	11	17,098
Mar	4,006	2,440	9,121	106	15,673
Apr	2,421	1,732	8,159	37	12,349
May	1,071	1,209	8,713	687	11,680
Jun	562	1,063	8,464	1,413	11,502
Jul	474	1,013	7,613	1,239	10,339
Aug	463	1,019	8,389	1,238	11,109
Sep	491	1,055	8,475	919	10,940
Oct	606	1,148	8,837	73	10,664
Nov	1,754	1,531	9,092	97	12,474
Dec	2,858	1,940	9,241	42	14,081
TOTAL	25,315	19,886	104,878	5,895	155,974
%TOTAL	16.2%	12.7%	67.2%	3.8%	100.0%

1999

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	5,687	2,957	8,813	14	17,471
Feb	3,588	2,236	8,225	21	14,070
Mar	4,369	2,549	9,610	49	16,577
Apr	2,223	1,720	8,494	110	12,547
May	1,193	1,337	8,152	76	10,758
Jun	569	1,103	7,716	390	9,778
Jul	491	1,120	7,798	2,296	11,705
Aug	448	1,067	7,940	1,855	11,310
Sep	487	1,148	8,089	166	9,890
Oct	734	1,230	8,979	17	10,960
Nov	2,093	1,682	9,250	77	13,102
Dec	3,799	2,398	9,398	48	15,643
TOTAL	25,681	20,547	102,464	5,119	153,811
%TOTAL	16.7%	13.4%	66.6%	3.3%	100.0%

2000

Month	Residential	Commercial	Industrial	Electric Utilities	TOTAL
Jan	5,552	2,948	8,493	35	17,028
Feb	6,438	3,190	8,630	15	18,273
Mar	2,877	2,047	9,720	27	14,671
Apr	1,917	1,644	9,128	68	12,757
May	1,140	1,356	8,814	571	11,881
Jun	576	1,168	7,262	719	9,725
Jul	494	1,111	7,562	548	9,715
Aug	468	1,101	7,992	650	10,211
Sep	536	1,161	7,041	75	8,813
Oct	1,011	1,332	7,672	31	10,046
Nov	2,032	1,773	8,208	55	12,068
Dec	6,068	3,097	6,324	14	15,503
TOTAL	29,109	21,928	96,846	2,808	150,691
%TOTAL	19.3%	14.6%	64.3%	1.9%	100.0%

Source: Energy Information Administration, *Natural Gas Monthly.*

South Carolina Natural Gas Service from Investor-Owned Companies to Residential Customers

The number of residential customers receiving natural gas service from privately-owned companies (South Carolina Pipeline Corporation does not service residential customers) increased by 114.8% from 1980 to 2000. Natural gas sales to residential customers increased by 25.2%, and the average use per residential customer (in million cubic feet) decreased by 41.7%. This significant decrease in natural gas use per residential customer could indicate the adoption of efficiency measures in South Carolina homes.

Table 4.4

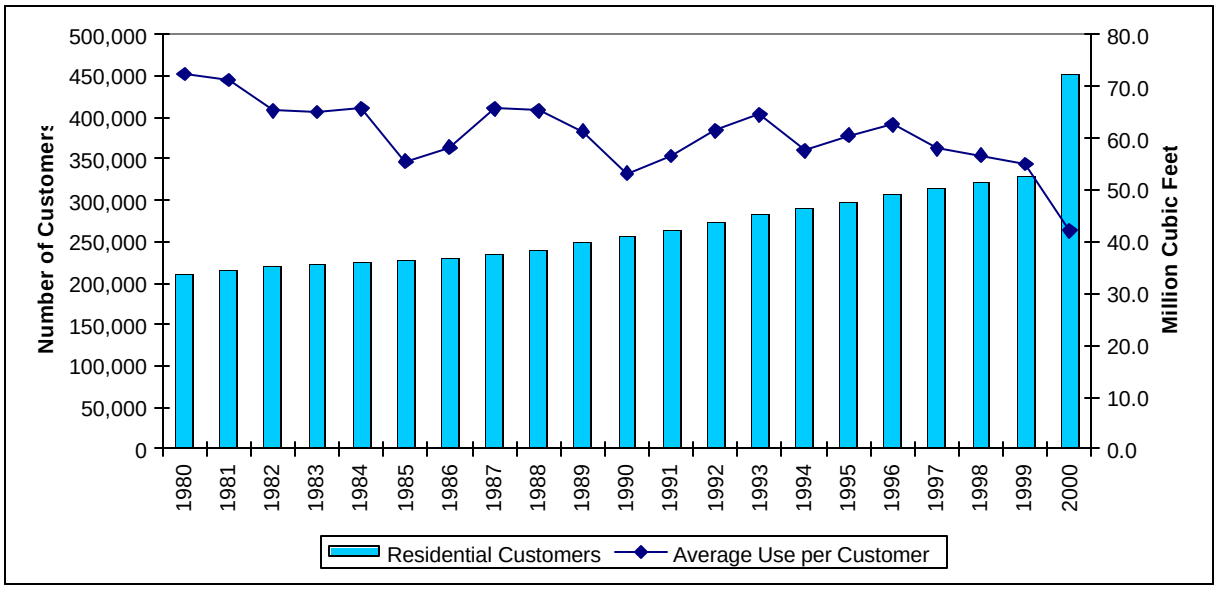
Natural Gas Service from Investor-Owned Companies to Residential Customers in South Carolina, 1980-2000
(In Million Cubic Feet)

Year	Residential Customers	Residential Gas Sales (mcf)	Average Use per Customer (mcf)
1980	210,992	15,275,992	72.4
1981	216,419	15,429,192	71.3
1982	220,828	14,425,041	65.3
1983	222,952	14,501,623	65.1
1984	224,976	14,771,137	65.7
1985	227,336	12,609,989	55.5
1986	230,192	13,424,281	58.3
1987	234,138	14,405,117	65.8
1988	239,974	15,687,512	65.4
1989	248,722	15,237,798	61.3
1990	256,902	13,697,251	53.3
1991	265,626	15,041,167	56.6
1992	275,259	16,919,438	61.5
1993	282,551	18,253,313	64.6
1994	290,080	16,700,986	57.6
1995	297,878	18,023,288	60.5
1996	306,636	19,184,739	62.6
1997	314,554	18,238,295	58.0
1998	322,030	18,250,454	56.7
1999	328,400	18,077,412	55.0
2000	453,283	19,123,223	42.2

Source: South Carolina Public Service Commission.

Figure 4.4

Number of South Carolina Residential Natural Gas Customers Serviced by Investor-Owned Companies and Average Use per Customer, 1980-2000



Source: South Carolina Public Service Commission.

South Carolina Average Consumption and Annual Cost of Natural Gas

From 1980 to 2000, natural gas consumption decreased by 18.1% while the annual cost per consumer increased by $242. In the commercial sector, natural gas consumption decreased by 52.5% with the annual cost per consumer rising by $395. The industrial sector saw a decrease of 35.7% in consumption and a decrease of $264,207 in the annual cost per consumer.

Table 4.5

South Carolina Average Consumption and Annual Cost of Natural Gas per Consumer by Economic Sector, 1980-2000
(Thousand Cubic Feet and Dollars)

Year	Residential		Commercial		Industrial	
	Consumption (thousand cubic feet)	Cost (dollars)	Consumption (thousand cubic feet)	Cost (dollars)	Consumption (thousand cubic feet)	Cost (dollars)
1980	72	301	848	2,721	88,420	264,408
1981	71	347	694	2,750	89,236	342,610
1982	66	362	563	2,710	57,782	252,708
1983	65	417	525	2,906	54,063	262,552
1984	66	438	515	3,015	67,707	341,281
1985	56	371	463	2,666	51,883	243,859
1986	59	383	467	2,632	49,680	185,206
1987	67	440	486	2,717	52,023	N/A
1988	66	446	471	2,632	54,342	N/A
1989	63	421	425	2,402	57,027	N/A
1990	54	388	386	2,275	62,739	N/A
1991	57	397	395	2,197	61,279	N/A
1992	63	440	406	2,294	60,158	N/A
1993	66	469	403	2,347	58,804	N/A
1994	56	431	393	2,401	50,571	N/A
1995	61	460	399	2,431	54,568	N/A
1996	69	512	418	2,618	54,288	N/A
1997	58	486	385	2,595	58,350	N/A
1998	55	459	380	2,458	59,215	N/A
1999	54	458	385	2,518	58,045	220
2000	59	543	403	3,116	56,858	201

Source: Energy Information Administration, *Historical Natural Gas Annual*.

Average Price Comparison of Natural Gas Deliveries to South Carolina and United States End-Use Consumers

South Carolina natural gas prices rose by $4.96 (118.4%) per thousand cubic feet from 1980 to 2000 in the residential sector as compared to $4.08 for the United States average. In the commercial sector, South Carolina natural gas prices increased by $4.51 (140.5%) per thousand cubic feet with the average United States prices increasing by $3.20. The industrial sector in South Carolina experienced an increase of $1.94 (64.9%) per thousand cubic feet with an increase of $1.92 for the United States. The price of natural gas deliveries to South Carolina electric utilities increased by $3.24 (130.6%) per thousand cubic feet and by $2.11 for the United States. Overall, South Carolina prices of natural gas deliveries to end-use consumers are considerably higher than the United States average in all but the industrial sector.

Table 4.6

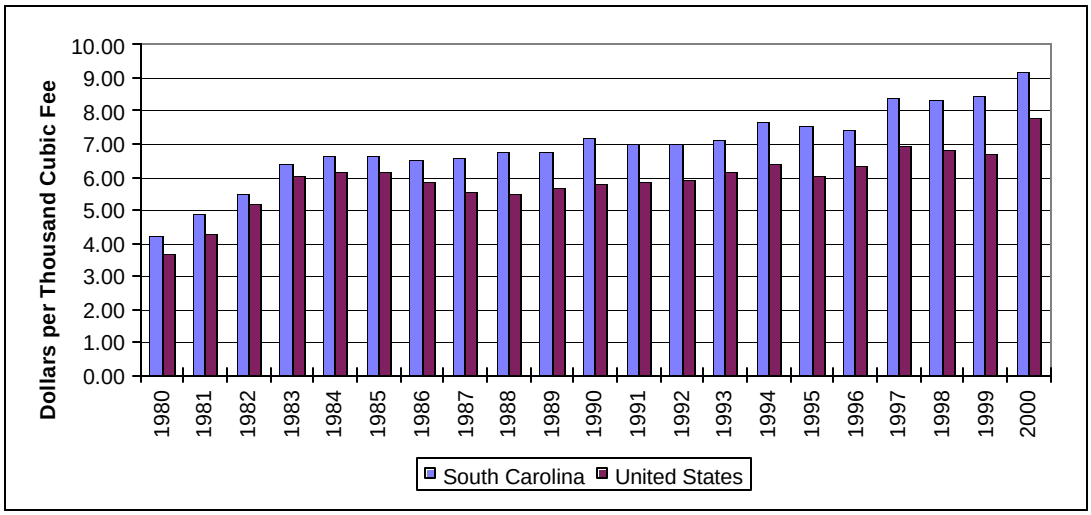
Average Price Comparison of Natural Gas Delivered to South Carolina and U.S. Residential, Commercial, Industrial and Electric Utilities Consumers, 1980-2000
(Dollars per Thousand Cubic Feet)

	Residential		Commercial		Industrial		Electric Utilities	
Year	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.
1980	4.19	3.68	3.21	3.39	2.99	2.56	2.48	2.27
1981	4.90	4.29	3.96	4.00	3.84	3.14	3.37	2.89
1982	5.51	5.17	4.81	4.82	4.37	3.87	4.05	3.48
1983	6.38	6.06	5.53	5.59	4.86	4.18	4.40	3.58
1984	6.62	6.12	5.86	5.55	5.04	4.22	4.51	3.70
1985	6.62	6.12	5.76	5.50	4.70	3.95	4.67	3.55
1986	6.54	5.83	5.63	5.08	3.73	3.23	2.27	2.43
1987	6.59	5.54	5.60	4.77	3.93	2.94	3.45	2.32
1988	6.73	5.47	5.59	4.63	3.43	2.95	1.86	2.33
1989	6.73	5.64	5.65	4.74	3.46	2.96	2.27	2.43
1990	7.17	5.80	5.90	4.83	3.35	2.93	1.76	2.38
1991	6.98	5.82	5.56	4.81	2.95	2.69	1.53	2.18
1992	7.03	5.89	5.65	4.88	3.13	2.84	1.73	2.36
1993	7.14	6.16	5.82	5.22	3.35	3.07	2.97	2.61
1994	7.65	6.41	6.11	5.44	3.32	3.05	1.71	2.28
1995	7.54	6.06	6.09	5.05	3.11	2.71	1.64	2.02
1996	7.41	6.34	6.26	5.40	3.77	3.42	4.56	2.69
1997	8.37	6.94	6.74	5.79	3.72	3.59	4.07	2.74
1998	8.30	6.82	6.48	5.48	3.29	3.14	3.62	2.40
1999	8.46	6.69	6.54	5.33	3.39	3.10	3.57	2.62
2000	9.15	7.76	7.72	6.59	4.93	4.48	5.72	4.38

Source: Energy Information Administration, *Historical Natural Gas Annual*.

Figure 4.5

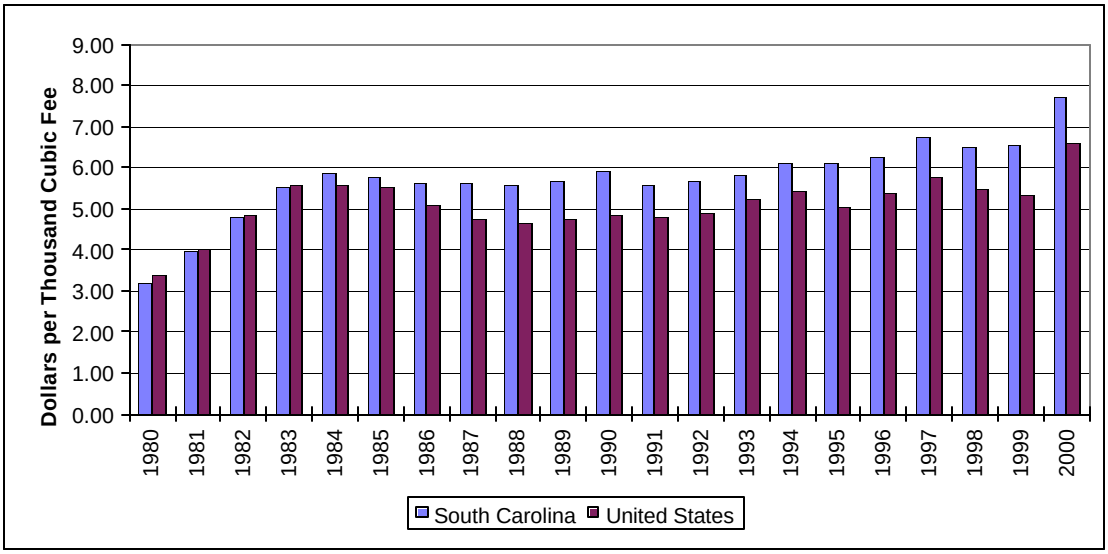
South Carolina and U.S. Average Price Comparison of Natural Gas Deliveries to Residential Sector Consumers, 1980-2000



Source: Energy Information Administration, *Historical Natural Gas Annual* and *Natural Gas Annual*.

Figure 4.6

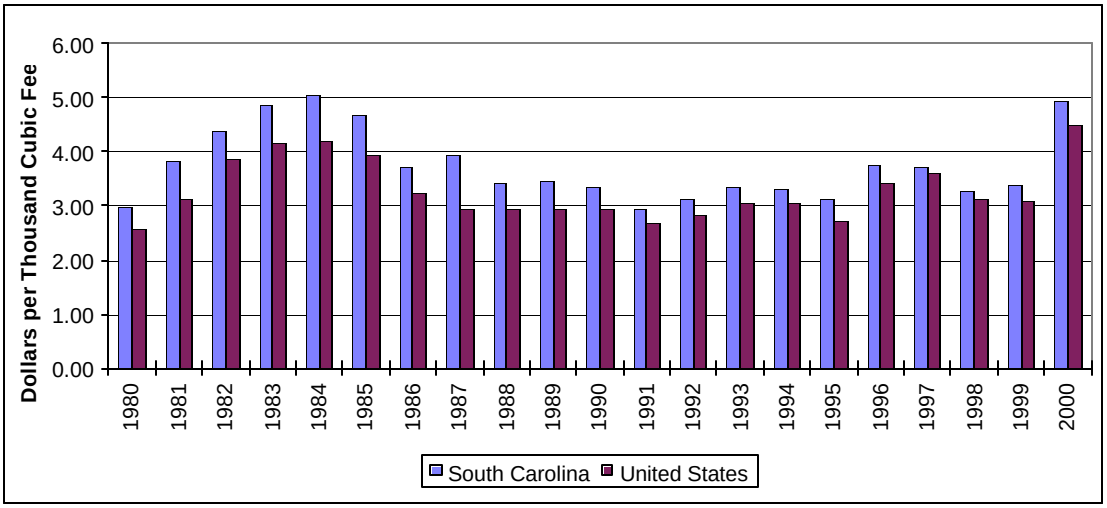
South Carolina and U.S. Average Price Comparison of Natural Gas Deliveries to Commercial Sector Consumers, 1980-2000



Source: Energy Information Administration, *Historical Natural Gas Annual* and *Natural Gas Annual*.

Figure 4.7

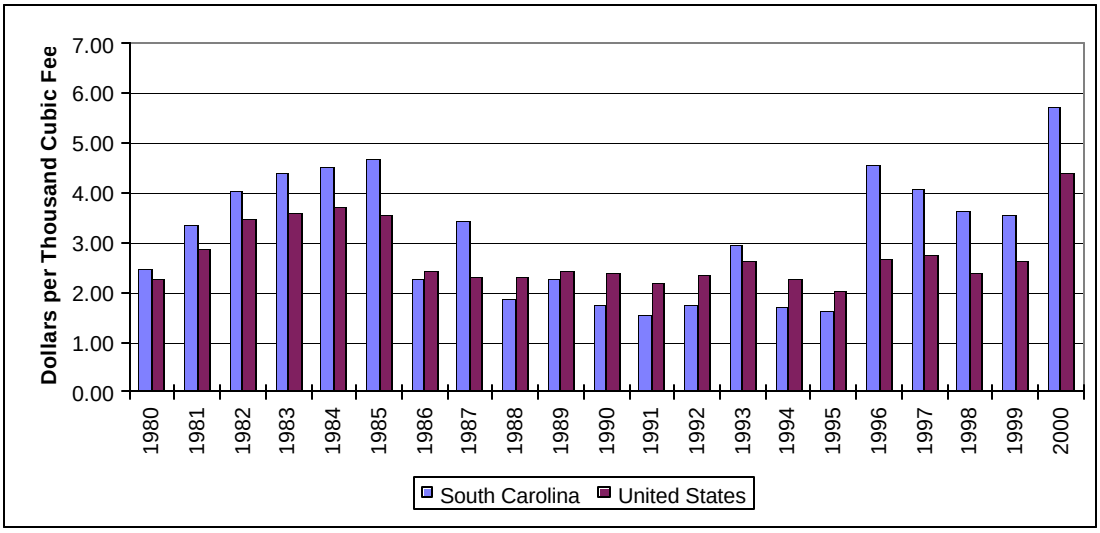
South Carolina and U.S. Average Price Comparison of Natural Gas Deliveries to Industrial Sector Consumers, 1980-2000



Source: Energy Information Administration, *Historical Natural Gas Annual* and *Natural Gas Annual*.

Figure 4.8

South Carolina and U.S. Average Price Comparison of Natural Gas Deliveries to Electric Utilities, 1980-2000



Source: Energy Information Administration, *Historical Natural Gas Annual* and *Natural Gas Annual*.

Quantity and Heating Value of Natural Gas Delivered to South Carolina Consumers

The amount (million cubic feet) of natural gas delivered to residential consumers in South Carolina increased by 54.0% from 1980 to 2000, while the number of consumers increased by 86.1%. In the commercial sector, the amount of natural gas delivered decreased by 3.3%, but the number of commercial customers increased by 102.9%. The industrial sector experienced an 10.2% increase in the amount of natural gas delivered, and had an increase of 72.8% in the number of consumers. The amount of natural gas delivered to electric utilities fluctuates wildly, so it is difficult to provide an accurate percentage amount. Overall, the amount of natural gas delivered to all sectors in South Carolina increased by 10.2% during this same period. The heating value (Btu per cubic foot) remained quite constant during this period.

Table 4.7

Natural Gas Delivered to South Carolina Consumers with Quantity and Heating Value 1980-2000

Year	Residential		Commercial		Industrial		Electric Utilities	Total Quantity Delivered to Consumers (mcf)	Heating Value (Btu per cubic foot)
	Quantity (mcf)	Consumers	Quantity (mcf)	Consumers	Quantity (mcf)	Consumers	Quantity (mcf)		
1980	18,866	263,000	22,885	27,000	92,046	1,000	5,417	139,214	1,033
1981	18,980	268,000	19,436	28,000	95,304	1,000	5,008	138,728	1,023
1982	17,548	267,000	15,560	28,000	61,595	1,000	517	95,220	1,030
1983	18,741	287,000	16,548	32,000	62,767	1,000	942	98,998	1,027
1984	19,246	291,000	16,635	32,000	69,526	1,000	435	105,842	1,026
1985	16,434	293,000	15,270	33,000	63,038	1,000	483	95,225	1,028
1986	17,440	298,000	15,894	34,000	61,455	1,000	1,386	96,175	1,030
1987	20,200	302,321	17,195	35,414	65,340	1,256	538	103,273	1,028
1988	20,790	313,831	17,472	37,075	69,177	1,273	2,378	109,817	1,027
1989	20,472	327,527	16,525	38,856	74,534	1,307	2,705	114,236	1,026
1990	18,396	339,486	15,394	39,904	86,831	1,384	6,975	127,596	1,028
1991	19,612	344,763	15,796	39,999	85,790	1,400	9,823	131,021	1,027
1992	22,392	357,818	16,644	40,968	94,327	1,568	1,795	135,158	1,027
1993	24,345	370,411	17,014	42,191	95,557	1,625	1,851	138,767	1,029
1994	23,486	416,773	17,870	45,487	97,500	1,928	3,005	141,861	1,031
1995	25,164	412,259	18,868	47,293	98,332	1,802	6,615	148,979	1,027
1996	29,406	426,088	20,328	48,650	95,493	1,759	1,206	146,433	1,030
1997	25,741	443,093	19,560	50,817	102,929	1,764	273	148,503	1,031
1998	25,430	460,141	19,828	52,237	102,324	1,728	5,893	153,476	1,034
1999	25,669	473,799	20,566	53,436	102,681	1,769	5,118	154,036	1,031
2000	29,057	489,340	22,105	54,794	97,682	1,718	2,814	151,660	1,029

Source: Energy Information Administration, *Historical Natural Gas Annual*.

SECTION 5: COAL

South Carolina Annual Coal Consumption by Sector

Annual coal consumption in the residential and commercial sectors, though very minimal, continues to fluctuate widely in South Carolina as indicated below in Table 5.1. From 1980 to 2000, the industrial sector increased its consumption of coal by 3.8%, and electric utilities increased their consumption of coal by 89.7%. Overall, coal consumption in South Carolina increased by 69.8% from 1980 to 2000. In 2000, electric utilities accounted for 88.7% of all coal consumed in South Carolina, while the industrial sector accounted for the remaining 11.3%.

Table 5.1

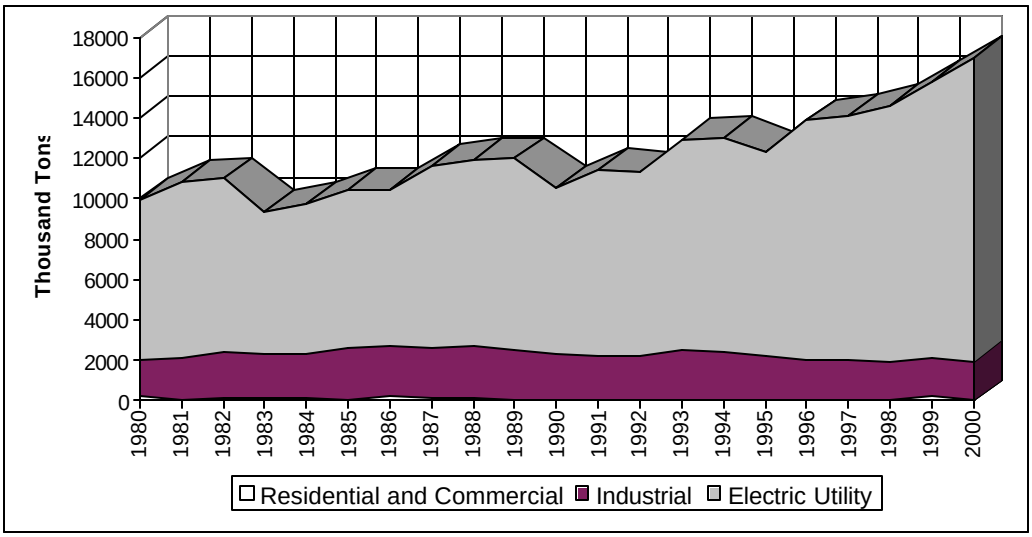
South Carolina Annual Coal Consumption by Sector, 1980-2000
(Thousand Tons)

Year	Residential and Commercial	Industrial	Electric Utility	TOTAL	Percent Change
1980	211	1,842	7,927	9,980	18.8%
1981	105	2,074	8,679	10,858	8.8%
1982	117	2,292	8,581	10,990	1.2%
1983	172	2,200	6,989	9,361	-14.8%
1984	115	2,226	7,428	9,769	4.4%
1985	66	2,525	7,888	10,479	7.3%
1986	219	2,465	7,777	10,461	-0.2%
1987	120	2,502	9,019	11,641	11.3%
1988	126	2,602	9,210	11,938	2.6%
1989	17	2,491	9,472	11,980	0.4%
1990	6	2,310	8,228	10,544	-12.0%
1991	22	2,212	9,218	11,452	8.6%
1992	31	2,177	9,078	11,286	-1.4%
1993	109	2,395	10,410	12,914	14.4%
1994	61	2,334	10,597	12,992	0.6%
1995	17	2,188	10,074	12,279	-5.5%
1996	19	2,000	11,833	13,852	12.8%
1997	1	2,014	12,096	14,111	1.9%
1998	23	1,962	12,664	14,649	3.8%
1999	237	1,863	13,666	15,766	7.6%
2000	N/A	1,912	15,034	16,946	7.5%

Source: Energy Information Administration, 1977-1991, *State Energy Data Report*; 1992-1999, *Coal Industry Annual*.

Figure 5.1

South Carolina Annual Coal Consumption by Sector, 1980-2000



Source: Energy Information Administration, *State Energy Data Report* and *Coal Industry Annual*.

Receipts and Delivered Cost of Coal by South Carolina Electric Utility and Plant

As indicated in Table 5.2 below, coal receipts at South Carolina electric utilities increased by 1,337 thousand short tons from 1998 to 2000 (10.3%). At the same time, the average delivered cost of coal to these utilities decreased by $1.33 per short ton. The Winyah and Cross plants, both operated by Santee Cooper (South Carolina Public Service Authority), accounted for the most coal receipts of all South Carolina electric plants, numbering 3,097 and 3,037 respectively (in thousand short tons) in 2000.

Table 5.2

Receipts and Average Delivered Cost of Coal by South Carolina Electric Utilities and Plants, 1998-2000

	1998		1999		2000	
Electric Utility and Plant	**Receipts (Thousand Short Tons)**	**Cost per Short Ton**	**Receipts (Thousand Short Tons)**	**Cost per Short Ton**	**Receipts (Thousand Short Tons)**	**Cost per Short Ton**
Carolina Power & Light Co.*						
Robinson	415	36.41	364	37.78	266	40.05
Duke Power Co.**						
Lee	435	36.56	409	35.85	505	34.79
SC Electric & Gas Co.						
Canadys	759	39.16	439	38.06	845	37.59
Cope	1,101	38.22	1,034	36.38	974	36.28
Hagood						
McMeekin	629	39.27	686	38.88	659	36.39
Parr						
Urquhart	436	39.77	622	40.17	506	39.20
Wateree	1,693	37.42	1,707	37.06	1,651	37.07
Williams	1,346	41.62	1,590	38.69	1,647	37.10
Santee Cooper						
Cross	2,608	34.8	2,686	34.19	3,037	33.97
Grainger	227	40.1	299	38.87	370	38.75
Jefferies	640	35.13	698	34.62	725	33.45
Winyah	2,656	35.04	2,343	34.33	3,097	32.93
TOTAL	**12,945**	**37.79**	**12,877**	**37.07**	**14,282**	**36.46**

Carolina Power & Light Company is now a subsidiary of Progress Energy.
**Duke Power Company is now a subsidiary of Duke Energy.
Source: Energy Information Administration, *Cost and Quality of Fuels for Electric Plants*.

Quarterly Average Coal Prices to Electric Utilities in South Carolina

Quarterly average coal prices to electric utilities in South Carolina generally hovered in the $37.00-$45.00 per ton range during the period 1980 to 2000. The most obvious aberration occurred during the years 1983 and 1984, when the prices rose to $49.15 and $49.28 per ton, respectively. As indicated in Figure 5.2, since 1994, the total average price has been steadily declining, reaching an all-time low figure of $35.40 in 2000.

Table 5.3

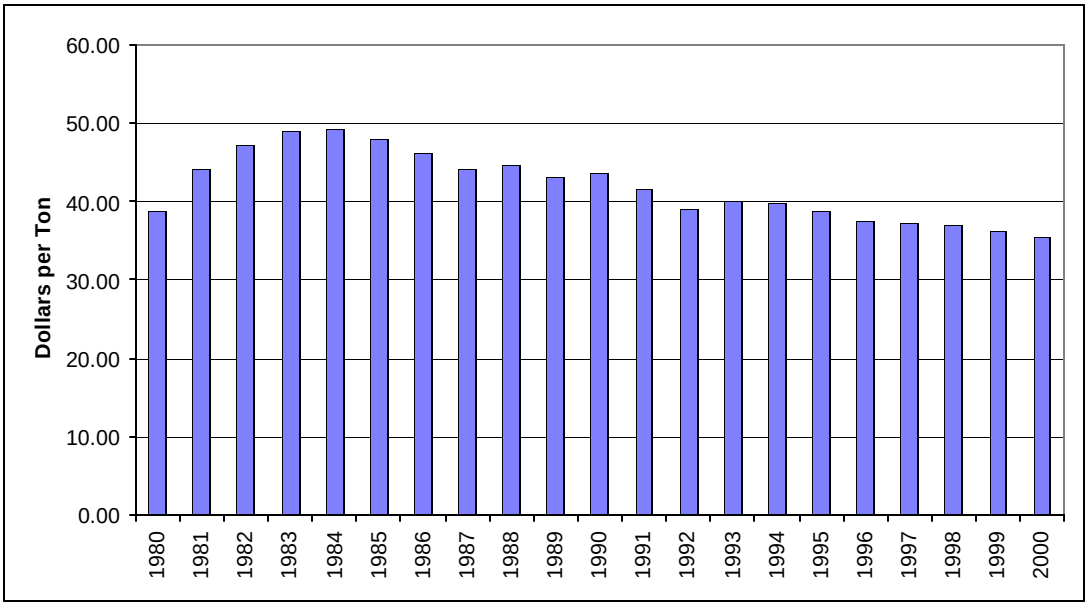
South Carolina Quarterly Average Coal Prices to Electric Utilities, 1980-2000
(Dollars per Ton)

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Average	Percent Change
1980	37.86	38.70	39.26	38.93	38.69	7.6%
1981	41.27	43.68	45.39	45.97	44.08	13.9%
1982	46.57	47.49	46.92	48.20	47.30	7.3%
1983	49.09	49.65	49.05	48.80	49.15	3.9%
1984	49.59	49.43	49.39	48.71	49.28	0.3%
1985	48.45	48.06	47.71	47.76	48.00	-2.6%
1986	47.38	46.54	46.00	45.26	46.30	-3.5%
1987	45.38	44.29	42.96	43.91	44.14	-4.7%
1988	45.79	44.98	43.49	44.60	44.72	1.3%
1989	44.12	42.67	42.82	42.86	43.12	-3.6%
1990	43.20	43.86	43.33	43.76	43.54	1.0%
1991	43.26	42.91	40.74	38.96	41.47	-4.8%
1992	39.00	39.02	38.74	39.76	39.13	-5.6%
1993	40.00	40.39	40.09	40.20	40.17	2.7%
1994	39.86	39.96	40.15	39.43	39.85	-0.8%
1995	39.72	39.81	38.05	37.99	38.89	-2.4%
1996	37.77	37.36	37.57	37.51	37.55	-3.4%
1997	37.68	36.98	37.13	37.07	37.22	-0.9%
1998	37.06	36.97	37.11	37.08	37.06	-0.4%
1999	36.90	36.09	36.29	35.77	36.26	-2.1%
2000	35.93	35.53	35.05	35.10	35.40	-2.4%

Source: Energy Information Administration, *Quarterly Coal Report*.

Figure 5.2

Quarterly Average Coal Prices to Electric Utilities in South Carolina, 1980-2000



Source: Energy Information Administration, *Quarterly Coal Report*.

South Carolina Price and Expenditure Estimates for Coal by Sector

Between 1980 and 1999, South Carolina price estimates for coal in the residential sector increased by 0.14 nominal dollars per million Btu. Both the commercial and the industrial sectors saw an increase of 0.06 nominal dollars per million Btu during this same period. The electric utilities sector had a decrease of 0.14 nominal dollars per million Btu. Overall, there was a decrease of 0.13 nominal dollars per million Btu during this period. Expenditure estimates for coal in the residential sector increased by 14.8% from 1980 to 1999. The commercial sector experienced an increase of 26.4% in coal expenditure estimates. The coal expenditure estimates in the industrial sector increased by 9.7%, and, 61.7% in the electric utilities sector. Collectively, coal expenditure estimates in South Carolina increased by 50.7% during this same period.

Table 5.4

South Carolina Price and Expenditure Estimates for Coal by Sector, 1980-1999
(Price in Nominal Dollars per Million Btu; Expenditures in Million Nominal Dollars)

	Residential		Commercial		Industrial		Electric Utilities		Totals	
Year	Prices	Expend.	Prices	Expend.	Prices	Expend.	Prices	Expend.	Prices	Expend.
1980	3.19	5.4	1.70	5.3	1.70	74.9	1.56	306.6	2.04	392.2
1981	3.88	3.4	1.88	3.1	1.88	94.8	1.80	384.6	2.36	485.9
1982	3.69	3.7	1.99	3.7	1.99	111.7	1.91	405.4	2.40	524.5
1983	3.67	5.5	1.86	5.2	1.86	101.3	1.96	343.3	2.34	455.3
1984	3.68	3.7	1.88	3.5	1.88	103.7	1.97	365.9	2.35	476.8
1985	3.48	2.0	1.77	1.9	1.77	111.3	1.91	378.4	2.23	493.6
1986	3.31	6.3	1.77	6.3	1.77	108.6	1.83	359.5	2.17	480.7
1987	3.20	3.4	1.70	3.3	1.70	109.3	1.74	397.0	2.09	513.0
1988	3.26	3.6	1.67	3.4	1.67	108.9	1.76	410.9	2.09	526.8
1989	3.34	0.5	1.69	0.5	1.69	105.1	1.71	408.0	2.11	514.1
1990	3.34	0.2	1.74	0.2	1.74	101.2	1.72	397.5	2.14	499.1
1991	3.15	0.6	1.71	0.6	1.71	95.5	1.63	381.4	2.05	478.1
1992	3.11	0.8	1.72	0.9	1.72	94.2	1.53	355.3	2.02	451.2
1993	3.26	3.3	1.72	2.9	1.72	103.8	1.57	418.2	2.07	528.2
1994	3.23	1.9	1.75	1.7	1.75	102.3	1.56	422.3	2.07	528.2
1995	3.10	0.5	1.71	0.4	1.71	94.5	1.51	391.5	2.01	486.9
1996	3.06	0.5	1.76	0.5	1.76	88.2	1.47	444.1	1.51	533.3
1997	3.12	*	1.76	*	1.76	89.1	1.45	450.0	1.49	539.1
1998	3.15	0.6	1.76	0.6	1.76	86.3	1.45	469.3	1.49	556.9
1999	3.05	6.2	1.76	6.7	1.76	82.2	1.42	495.7	1.47	590.9

Source: Energy Information Administration, *State Energy Price and Expenditure Report*.

Appendix A: Glossary

Anthracite: The highest rank of coal; used primarily for residential and commercial space heating. It is hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite is generally less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per ton on a moist, mineral-matter-free basis.

Average Revenue per Kilowatthour: The average revenue per kilowatthour of electricity sold by sector (residential, commercial, industrial, or other) and geographic area (State, Census, division, and national) is calculated by dividing the total monthly revenue by the corresponding total monthly sales for each sector and geographic area.

Barrel (bbl): A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons.

Biomass (Biofuels): Energy sources from recent-term organic (plant and animal) matter. Nonfossil biomass energy sources are essentially unprocessed; they are burned or gassified, as received, to produce thermal energy or electricity. Examples are fuelwood, waste wood, garbage, and crop waste.

Bituminous Coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content is usually less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis.

British Thermal Unit (Btu): A standard unit for measuring the quantity of heat energy equal to the quantity of heat required to raise the temperature of 1 pound of water by 1 degree Fahrenheit. Because different energy types use different standards of measurement, they are often converted into Btu to enable comparison. One Btu is equal to 252 calories of heat.

Capability: The maximum load that a generating unit, generating station, or other electrical apparatus can carry under specified conditions for a given period of time without exceeding approved limits of temperature and stress.

Coal: A black or brownish-black solid combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, sub-bituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value.

Commercial Sector: The commercial sector is generally defined as non-manufacturing business establishments, including hotels, motels, restaurants, churches, wholesale businesses, retail stores, and health, social, and educational institutions.

Cooperative Electric Utility: An electric utility legally established to be owned by and operated for the benefit of those using its service. The utility company will generate, transmit, and/or distribute supplies of electric energy to a specified area not being serviced by another utility. Such ventures are generally exempt from Federal income tax laws. Most electric cooperatives have been initially financed by the Rural Electrification Administration, U.S. Department of Agriculture.

Demand-side-Management (DSM): Refers to the use of cost-effective conservation, efficiency, and load management in order to reduce the demand for and cost of energy services. DSM is a resource option that complements power supply. It not only saves the customer money, but also helps a utility achieve less pollution and avoid more costly supply-side investments.

Distillate Fuel Oil: Usually refers to "home heating oil." Included are Fuel Oils No. 1, No. 2, and No. 4; and Diesel Fuels No. 1, No. 2, and No. 4. These products are used primarily for space heating, on-and-off highway diesel engine fuel (including railroad engine fuel and fuel for agriculture machinery), and electric power generation.

Electric Utility: A corporation, person, agency, authority, or other legal entity that owns and/or operates facilities within the U.S. for the generation, transmission, distribution, or sale of electric energy for use by both the public and private sectors.

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in Btus.

End-Use: Any ultimate consumption of any type of fossil fuel (petroleum, coal, natural gas) or electricity whether generated by fossil fuel or other energy sources. End-users are often classified by economic sector, such as residential, commercial, industrial, and transportation.

Facility: An existing or planned location or site at which prime movers, electric generators, and/or equipment for converting mechanical, chemical, and/or nuclear energy into electric energy are situated, or will be situated. A facility may contain more than one generator of either the same or different prime mover type.

Fossil Fuel: Any naturally occurring organic fuel, such as petroleum, coal, and natural gas, which are derived from the remains of ancient plants and animals. Fossil fuels are sometimes referred to as conventional fuels or conventional energy sources (as compared with renewable energy sources: solar power, biomass, wind energy, etc.) because the bulk of today's energy generation is derived from them and most of the industrial economy is based upon them.

Gallon: A unit of volume. A U.S. gallon contains 3.785 liters and it is 0.83 times the imperial gallon. One U.S. gallon of water weighs 8.3 pounds.

Gas Turbine Plant: A plant in which the prime mover is a gas turbine. It typically consists of an axial-flow air compressor and one or more combustion chambers, where liquid or gaseous fuel is burned and the hot gases are passed to the turbine and where the hot gases expand to drive the generator and are then used to run the compressor.

Generating Unit: Any combination of physically connected generator(s), reactor(s), boiler(s), combustion turbine(s), or other prime mover(s) operated together to produce electric power.

Hydroelectric Plant (Hydro): A plant in which the turbine generators are driven by falling water.

Industrial Sector: The industrial sector is that section of the economy generally defined as manufacturing, construction, mining, agriculture, fishing, and forestry establishments.

Interruptible Gas: Gas sold to customers with a provision that permits curtailment or cessation of service at the discretion of the distributing company under certain circumstances, as specified in the service contract.

Investor-Owned Utility: A class of utility whose stock is publicly traded and which is organized as a taxpaying business, usually financed by the sale of securities in the capital market. It is regulated and authorized to achieve an allowed rate of return.

Jet Fuel: Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines. Some jet fuel is used for generating electricity in gas turbines.

Kerosene: A petroleum middle distillate having burning properties suitable for use as an illuminant when burned in wick lamps. Kerosene is also used in space heaters, cooking stoves, and water heaters.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): One thousand watt hours. The amount of electrical energy involved with a 1-kilowatt demand over a period of one hour. One kilowatthour is equivalent to 3,412 Btu of heat energy.

Liquified Gases (LPG): Propane, propylene, butane, and propane-butane mixtures produced at a refinery or natural gas processing plant, including plants that fractionate raw natural gas processing plant liquids. These are derived by refining and processing natural gas, crude oil or unfinished oil.

Load (Electric): The amount of electricity delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the consumers.

Mcf: One thousand cubic feet.

Megawatt: 1,000 kilowatts; 1 million watts.

Motor Gasoline: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark ignition engines. Included are leaded and unleaded products and refinery products.

Natural Gas: A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geological formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane, and is generally much higher in heat content than manufactured gas.

Net Generation: Gross generation minus plant use from all electric utility owned plants. The energy required for pumping at a pumped-storage plant is regarded as plant use and must be deducted from the gross generation.

No. 1 Diesel Fuel: A light distillate having ignition properties suitable for use in compression ignition engines. City buses use this product extensively.

No. 1 Fuel Oil: A distillate fuel oil intended for use in vaporizing pot-type burners.

No. 2 Diesel Fuel: A heavier distillate for use in compression ignition engines less sensitive than those requiring No. 1 Diesel Fuel. Highway transport trucks are large consumers of this product.

No. 2 Fuel Oil: A distillate fuel oil for general purpose domestic heating in burners not requiring No. 1 fuel oil.

No. 4 Fuel Oil: An oil for commercial burner installations with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks.

No. 5 and No. 6 Fuel Oil: See residual fuel.

Nuclear Fuel: Fissionable materials that have been enriched to such a composition that, when placed in a nuclear reactor, will support a self-sustaining fission chain reaction, producing heat in a controlled manner for process use. Also listed as uranium.

Peak Demand: The maximum electric load during a specified period of time.

Petroleum: A mixture of hydrocarbons existing in the liquid state found in natural underground reservoirs, which includes fuel oil products, crude oil, kerosene, and jet fuel.

Primary Energy: Energy in its naturally occurring form (coal, oil, uranium, etc.) before conversion to end-use forms. The term is used in this report to indicate energy consumed by the major sectors (especially electric utilities) without regard to energy consumed by end-users.

Propane: Also known as liquefied petroleum gas (LPG). A colorless, highly volatile hydrocarbon that is readily recovered as a liquefied gas at natural gas processing plants and refineries. It is used primarily for residential and commercial heating and cooling, and also a fuel for transportation and industrial uses. Propane is the first product refined from crude petroleum.

Qualifying Facility: A cogeneration or small power production facility that meets certain ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC) pursuant to the Public Utility Regulatory Policies Act (PURPA).

Refined Petroleum: Products obtained from the processing of crude oil, unfinished oils, natural gas liquids and other miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, ethane, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, paraffin wax, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Renewable Resources: Naturally, but flow-limited resources that can be replenished. They are virtually inexhaustible in duration, but limited in the amount of energy that is available per unit of time. Some (such as geothermal and biomass) may be stock-limited in that stocks are depleted by use, but on a time scale of decades, or perhaps centuries, they can probably be replenished. Renewable energy resources include: biomass, hydro, geothermal, solar and wind.

Residential Sector: The residential sector is defined as private household establishments which consume energy primarily for space heating, water heating, air conditioning, lighting, refrigeration, cooking and clothes drying.

Residual Fuel: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil, heavy diesel oil, Navy Special Fuel Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for production of electric power, space heating, vessel bunkering, and various industrial purposes.

Sales for Resale: Energy supplied to other electric utilities, cooperatives, municipalities, and federal and state electric agencies for resale to ultimate consumers.

Short Ton (coal): A unit of weight equal to 2,000 pounds used for calculating the volume of coal.

Steam-Electric Plant: A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Watt: The unit of measure for electric power or rate of doing work. The rate of energy transfer equivalent to 1 ampere flowing under a pressure of 1 volt at unity power factor.

Watthour (Wh): An electrical energy unit of measure equal to 1 watt of power supplied to, or taken from, an electric circuit steadily for one hour.

Appendix B: Conversion Factors

Average Fuel/Btu Equivalents:

1 Kilowatthour of Electricity	3,413 Btu
1 Cubic Foot of Natural Gas	1,008 to 1,034 Btu
1 Therm of Natural Gas	100,000 Btu
1 Gallon of Liquefied Petroleum Gas (LPG)	95,475 Btu
1 Barrel of Crude Oil	5,800,000 Btu
1 Gallon of Crude Oil	138,095 Btu
1 Gallon of Kerosene or Light Distillate Oil	135,000 Btu
1 Gallon of Middle Distillate or Diesel Fuel Oil	138,690 Btu
1 Gallon of Residual Fuel Oil	149,690 Btu
1 Gallon of Gasoline	125,000 Btu
1 Ton of Coal	16,200,000 to 26,000,000 Btu
1 Ton of Wood	9,000,000 to 17,000,000 Btu
1 Standard Cord of Wood	6,000,000 to 8,000,000 Btu

Measurement Equivalents:

1 Ton (short) = 2,000 pounds; 6.65 barrels (crude oil)
1 Metric Ton = 2,200 pounds
1 Barrel (bbl) = 42 gallons; 5.615 cubic feet; 159.0 liters
1 Mcf = 1,000 cubic feet
1 Therm = 100,000 Btu
1 Thousand Btu (Mbtu) = 1,000 Btu
1 Kilowatthour (kWh) = 1,000 watt-hours
1 Megawatthour (MWh) = 1,000 kWh or 1,000,000 watt-hours
1 Gallon = 4.524 pounds of liquefied petroleum gas
1 Standard Cord of Wood = 8 feet x 4 feet x 4 feet; 128 cubic feet; approx. 4,000 pounds